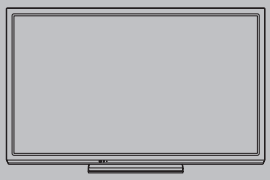
Panasonic®

U50A series
Australia

X50Z series
New Zealand

U50Z series
New Zealand

Operating Instructions
Plasma Television



VIERA

Thank you for purchasing this Panasonic product.
Please read these instructions carefully before operating this product and retain them for future reference.
The images shown in this manual are for illustrative purposes only.

English

TQB4TC0259

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Additional information may be obtained from MPEG LA, LLC.
See http://www.mpegla.com.

Do not display any still part of the image for a long period

In such cases the still part of the image remains dimly on the plasma screen ("image retention"). This is not considered a malfunction and is not covered by the warranty.

Typical still image parts:
- Channel number, channel logo and other logos
- Still or moving pictures viewed in 4:3 or 14:9 aspect ratio

- Video games
- Images from PC

To avoid image retention, the contrast is lowered automatically and the screen becomes dim after a few minutes if no signals are sent or no operations are performed. (p. 80)

The illustration for U50A series is used in this manual unless otherwise mentioned.
Illustrations shown may be different between models and countries.

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Enjoy your TV!

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Safety Precautions

Warning

Handling the mains plug and lead

- Insert the mains plug fully into the socket outlet. (If the mains plug is loose, it could generate heat and cause fire.)
- Ensure that the mains plug is easily accessible.
- Ensure the earth pin on the mains plug is securely connected to prevent electrical shock.
  - An apparatus with CLASS I construction shall be connected to a mains socket outlet with a protective earthing connection.
- Do not touch the mains plug with a wet hand. (This may cause electrical shock.)
- Do not use any mains lead other than that provided with this TV. (This may cause fire or electrical shock.)
- Do not damage the mains lead. (A damaged lead may cause fire or electrical shock.)
  - Do not move the TV with the lead plugged in the socket outlet.
  - Do not place a heavy object on the lead or place the lead near a high-temperature object.
  - Do not twist the lead, bend it excessively or stretch it.
  - Do not pull on the lead. Hold onto the mains plug body when disconnecting the lead.
  - Do not use a damaged mains plug or socket outlet.

If you find any abnormality, remove the mains plug immediately!

AC 220-240 V
50 / 60 Hz

Power source / Installation

- This TV is designed for:
  - AC 220-240 V, 50 / 60 Hz
  - Indoor use

Do not remove covers and NEVER modify the TV yourself

- Do not remove the rear cover as live parts are accessible when it is removed. There are no user serviceable parts inside. (High-voltage components may cause serious electrical shock.)
- Have the TV checked, adjusted, or repaired at your local Panasonic dealer.

Do not expose to direct sunlight and other sources of heat

- Avoid exposing the TV to direct sunlight and other sources of heat.

To prevent the spread of fire, keep candles or other open flames away from this product at all times

Do not expose to rain or excessive moisture

- To prevent damage which might result in electric shock or fire, do not expose this TV to rain or excessive moisture. This TV must not be exposed to dripping or splashing water and objects filled with liquid, such as vases, must not be placed on top of or above the TV.

Do not insert foreign objects into the TV

- Do not allow any objects to drop into the TV through the air vents. (Fire or electrical shock may result.)

Do not place the TV on sloped or unstable surfaces, and ensure that the TV does not hang over the edge of the base

- The TV may fall off or tip over.

Use only the dedicated pedestals / mounting equipment

- Using an unapproved pedestal or other fixtures may make the TV unstable, risking injury. Be sure to ask your local Panasonic dealer to perform setup.
- Use approved pedestals (p. 7) / wall-hanging brackets (p. 7).

Do not allow children to handle SD Card

- As with any small object, SD Cards can be swallowed by young children. Please remove SD Card immediately after use and store out of reach of children.

Important Installation Notices

Install the TV on a stable surface

If a television is not positioned in a sufficiently stable location, it can be potentially hazardous due to falling. Many injuries, particularly to children, can be avoided by taking simple precautions such as:

- Using cabinets or stands recommended by the manufacturer of the television.
- Only using furniture that can safely support the television.
- Ensuring the television is not overhanging the edge of the supporting furniture.
- Not placing the television on tall furniture (for example, cupboards or bookcases) without anchoring both the furniture and the television to a suitable support.
- Not standing the televisions on cloth or other materials placed between the television and supporting furniture.
- Educating children about the dangers of climbing on furniture to reach the television or its controls.

When cleaning the TV, remove the mains plug

- Cleaning an energised TV may cause electrical shock.

When the TV is not going to be used for a long period of time, remove the mains plug

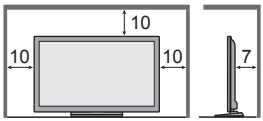
- This TV will still consume some power even in the Off mode, as long as the mains plug is still connected to a live socket outlet.

Transport only in upright position

- Transporting the TV with its display panel facing upward or downward may cause damage to the internal circuitry.

Allow sufficient space around the TV for radiated heat

Minimum distance



(cm)

- When using the pedestal, keep the space between the bottom of the TV and the surface where the TV is set.
- In case of using Wall-hanging bracket, follow the manual of it.

Do not block the rear air vents

- Blocked ventilation by newspapers, table cloths, curtains, etc. may cause overheating, fire or electrical shock.

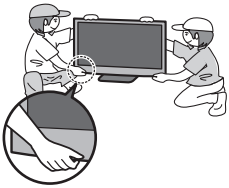
Do not expose your ears to excessive volume from the headphones

- Irreversible damage can be caused.

Do not apply strong force or impact to the display panel

- This may cause damage resulting in injury.

The TV is heavy. Handle the TV with 2 or more people. Support as shown to avoid injury by the TV tipping or falling.



Accessories / Options

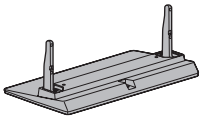
Standard accessories

Remote Control
- N2QAYB000604

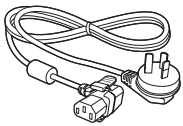
Batteries for the Remote Control (2)
- R6 (AA)

➡ (p. 7)

Pedestal
➡ (p. 7)



Mains lead ➡ (p. 13)



Ferrite core for LAN cable (2)
(Large size)
➡ (p. 15)

Ferrite core for RF cable
(Large size)
➡ (p. 13)
U50 series

Ferrite core for USB cable
(Middle size)
➡ (p. 78)

Ferrite core for headphones
(Small size)
➡ (p. 69, 71)

Use the Ferrite cores to comply with the EMC standard.

Operating Instructions with Warranty statement

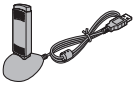
Fall-prevention parts
➡ (p. 8)

- The shape of accessories may differ from the actual.
- Accessories may not be placed all together. Take care not to throw them away unintentionally.
- This product contains possibly dangerous parts (such as plastic bags), that can be breathed in or swallowed by young children accidentally. Keep these parts out of reach of young children.

Optional accessories

Please contact your local Panasonic dealer to purchase the recommended optional accessories. For additional details, please read the manual of the optional accessories.

Wireless Adaptor for VIERA
- TY-WL20A

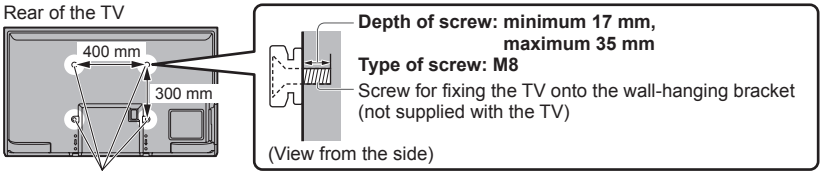


Caution
- To use the Wireless LAN Adaptor, an access point needs to be obtained.
- Depending on the area, this optional accessory may not be available.
- Additional information for Wireless LAN Adaptor and access point may be on the following website.
  http://panasonic.jp/support/global/cs/tv/

Wall-hanging bracket

- TY-WK4P1RW

- Tilting angle for this TV:
  0 (vertical) to 10 degrees U50 series
  0 (vertical) to 15 degrees X50 series

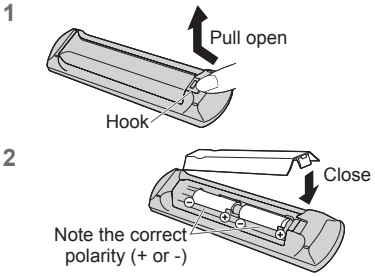

Rear of the TV
400 mm
300 mm
Depth of screw: minimum 17 mm, maximum 35 mm
Type of screw: M8
Screw for fixing the TV onto the wall-hanging bracket (not supplied with the TV)
(View from the side)

Holes for wall-hanging bracket installation

Warning

- Using other wall-hanging brackets, or installing a wall-hanging bracket by yourself have the risk of personal injury and product damage. In order to maintain the unit's performance and safety, be absolutely sure to ask your dealer or a licensed contractor to secure the wall-hanging brackets. Any damage caused by installing without a qualified installer will void your warranty.
- Carefully read the instructions accompanying optional accessories, and be absolutely sure to take steps to prevent the TV from falling off.
- Handle the TV carefully during installation since subjecting it to impact or other forces may cause product damage.
- Take care when fixing wall brackets to the wall. Always ensure that there are no electrical cables or pipes in the wall before hanging bracket.
- To prevent fall and injury, remove the TV from its fixed wall position when it is no longer in use.

Installing / removing remote's batteries



Caution

- Incorrect installation may cause battery leakage and corrosion, resulting in damage to the remote control.
- Do not mix old and new batteries.
- Do not mix different battery types (such as alkaline and manganese batteries).
- Do not use rechargeable (Ni-Cd) batteries.
- Do not burn or break up batteries.
  Batteries must not be exposed to excessive heat such as sunshine, fire or the like.
- Do not disassemble or modify the remote control.

Attaching the pedestal

Warning

Do not disassemble or modify the pedestal.

- Otherwise the TV may fall over and become damaged, and personal injury may result.

Caution

Do not use any pedestal other than the one provided with this TV.

- Otherwise the TV may fall over and become damaged, and personal injury may result.

Do not use the pedestal if it becomes warped or physically damaged.

- If you use the pedestal while it is physically damaged, personal injury may result. Contact your local Panasonic dealer immediately.

During set-up, make sure that all screws are securely tightened.

- If insufficient care is taken to ensure screws are properly tightened during assembly, the pedestal will not be strong enough to support the TV, and it might fall over and become damaged, and personal injury may result.

Ensure that the TV does not fall over.

- If the TV is knocked or children climb onto the pedestal with the TV installed, the TV may fall over and personal injury may result.

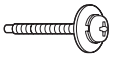
Two or more people are required to install and remove the TV.

- If two or more people are not present, the TV may be dropped, and personal injury may result.

Ⓐ **Assembly screw (4)** (silver)

M5 × 18

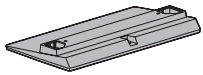
Ⓑ **Assembly screw (4)** (black)



M5 × 30

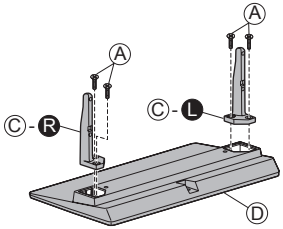
Ⓒ **Pole**
- R: TBL5ZA3311
- L: TBL5ZA3310

Ⓓ **Base**
- TBL5ZX0441 (42” class)
- TBL5ZX0430 (50” class)



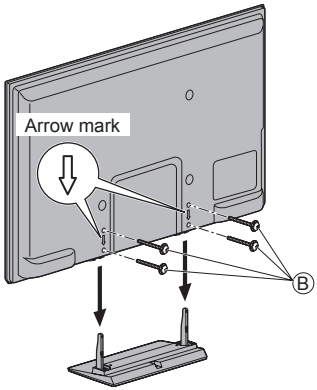
■ Assembling the pedestal

Use the assembly screws Ⓐ to fasten the poles Ⓒ to the base Ⓓ securely.
- Make sure that the screws Ⓐ are securely tightened.
- Forcing the assembly screws the wrong way will strip the threads.
- “L” or “R” mark is stamped on the bottom of the pole.



■ Securing the TV

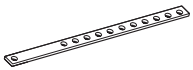
Use the assembly screws Ⓑ to fasten securely.
- Tighten the four assembly screws loosely at first, then tighten them firmly to fix securely.
- Carry out the work on a horizontal and level surface.



Preventing the TV from falling over

This TV could fall over if it is pushed, pulled or knocked down.
We therefore recommend the TV is secured to the furniture as illustrated.
- This measure is designed to reduce the risk of injury from a falling TV. However, it cannot guarantee protection in all cases.

Ⓔ **Band**

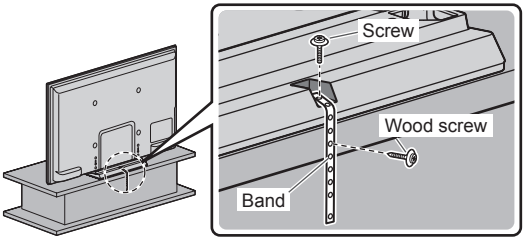


Ⓕ **Screw**

Ⓖ **Wood screw**

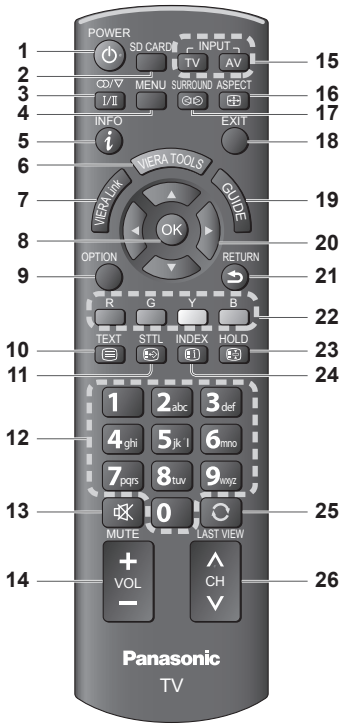
Securing to a furniture
Fix pedestal and furniture together with band.

- This image is for illustrative purposes only.



Identifying Controls

Remote Control



1 Standby On / Off switch
- Switches TV on or off standby.

2 [Media Player] ➡ (p. 46)
- Switches to SD Card and USB device viewing / listening mode.

3 Sound Selection
- Changes the sound track in Digital TV (if available).
- Changes multiplex sound mode in Analogue TV (if available). ➡ **(p. 73)**

4 [Main Menu] ➡ (p. 30)
- Press to access Picture, Sound and Setup Menus.

5 Information ➡ (p. 20)
- Displays channel and programme information.

6 VIERA TOOLS ➡ (p. 29)
- Displays some special feature icons and accesses easily.

7 [VIERA Link Menu] ➡ (p. 64)
- Accesses VIERA Link Menu

8 OK
- Confirms selections and choices.
- Press after selecting channel positions to quickly change channel.
- Displays the Channel List.

9 [Option Menu] ➡ (p. 21)
- Easy optional setting for viewing, sound, etc.

10 Teletext
- This button is not used for this model. U50A series
- Switches to teletext mode.
  U50Z series / X50Z series ➡ **(p. 26)**

11 Subtitles ➡ (p. 20)
- Displays subtitles.

12 Numeric buttons
- Changes channel. U50A series
- Changes channel and teletext pages.
  U50Z series / X50Z series
- Sets characters.
- When in Standby mode, switches TV on.

13 Sound Mute
- Switches sound mute on or off.

14 Volume Up / Down

15 Input mode selection
- TV - switches Digital TV / Analogue TV mode. ➡ **(p. 19)**
- AV - switches to AV input mode from Input Selection list. ➡ **(p. 28)**

16 Aspect ➡ (p. 21)
- Changes aspect ratio.

17 [Surround] ➡ (p. 33)
- Switches surround sound setting.

18 Exit
- Returns to the normal viewing screen.

19 TV Guide U50A series **➡ (p. 23)**
Freeview Guide U50Z series / X50Z series **➡ (p. 25)**

20 Cursor buttons
- Makes selections and adjustments.

21 Return
- Returns to the previous menu / page.

22 Coloured buttons
- Used for the selection, navigation and operation of various functions.

23 Hold
- Freeze / unfreeze picture. ➡ **(p. 20)**
- Holds the current teletext page (teletext mode).
  U50Z series / X50Z series ➡ **(p. 26)**

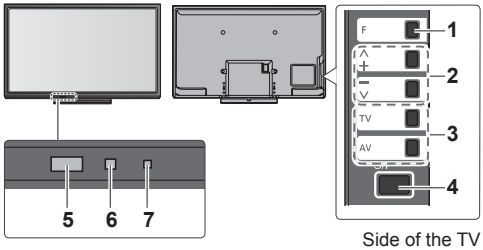
24 Index ➡ (p. 26)
- This button is not used for this model. U50A series
- Returns to the teletext index page (teletext mode).
  U50Z series / X50Z series

25 Last view ➡ (p. 22)
- Switches to previously viewed channel or input modes.

26 Channel Up / Down

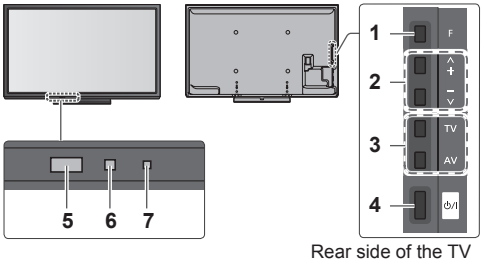
Indicator / Control panel

U50 series



Side of the TV

X50 series



Rear side of the TV

1 Function select
- [Volume] / [Contrast] / [Brightness] / [Colour] / [Sharpness] / [Tint] (NTSC signal) / [Bass]* / [Treble]* / [Balance] / [Digital TV Auto Tuning] / [Analogue TV Auto Tuning]
  *[Music] or [Speech] mode in the Sound Menu

2 Channel Up / Down, Value change (when using the F button), Switching the TV on

3 Changes the input mode

4 Mains power On / Off switch
- Use to switch the mains power.
  If you turned the TV off during Standby mode by the remote control last time, the TV will be in Standby mode when you turn the TV on with Mains power On / Off switch.

- When pressing the control panel button (1 - 4), the control panel guide appears on the left side of the screen for 3 seconds to highlight the pressed button.

5 Remote control signal receiver
Do not place any objects between the TV remote control signal receiver and remote control.

6 C.A.T.S. (Contrast Automatic Tracking System) sensor
- Senses brightness to adjust picture quality when [Eco Mode] in the Picture Menu is set to [On].
  ➡ **(p. 31)**

7 Power LED
Red: Standby
Green: On
- The LED blinks when the TV receives a command from the remote control.

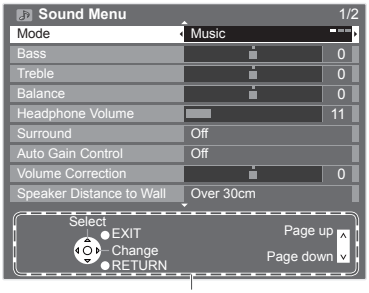
Using the On Screen Displays - Operation guide

Many features available on this TV can be accessed via the On Screen Display menu.

■ Operation guide

Operation guide will help you to operate by using the remote control.

Example: [Sound Menu]



Operation guide

■ How to use remote control

MENU — Open the main menu

Move the cursor / select the menu item (up and down only) / adjust levels (left and right only) / select from a range of options (left and right only)

Access the menu / store settings after adjustments have been made or options have been set

RETURN — Return to the previous menu

EXIT — Exit the menu system and return to the normal viewing screen

Auto power standby function

The TV will automatically go into Standby mode in the following conditions:

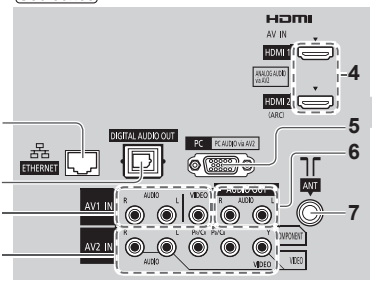
- No signal is received and no operation is performed for 30 minutes in Analogue TV.
- [Off Timer] is active in the Setup Menu. (p. 21)
- No operation is performed for the period selected in [Auto Standby] (p. 36).

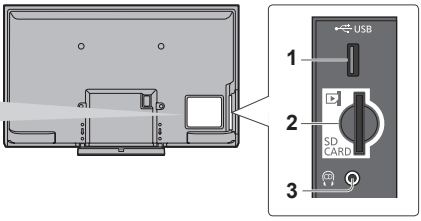
Basic Connection

External equipment and cables shown are not supplied with this TV.
Please ensure that the unit is disconnected from the mains socket before attaching or disconnecting any leads.
When disconnecting the mains lead, be absolutely sure to disconnect the mains plug at the socket outlet first.

Terminals

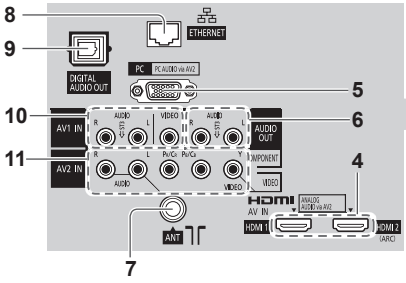
U50 series

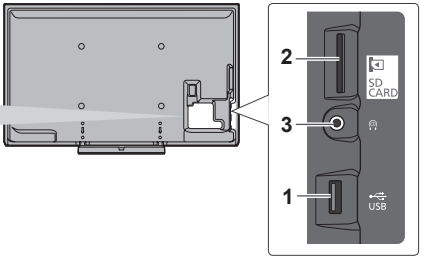




Side of the TV

X50 series

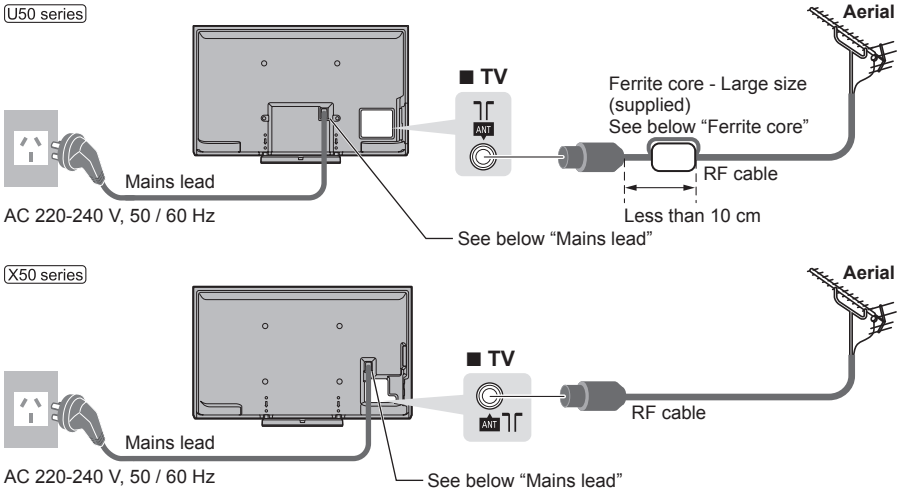




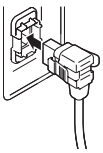
Rear side of the TV

1 **USB** ➡ **(p. 15, 45, 54, 69, 71)**
2 **SD Card slot** ➡ **(p. 45)**
3 **Headphone jack** ➡ **(p. 69, 71)**
4 **HDMI1 - 2** ➡ **(p. 14, 68, 70)**
5 **PC** ➡ **(p. 69, 71)**
6 **AUDIO OUT** ➡ **(p. 68, 70)**
7 **Antenna terminal** ➡ **(p. 13, 14)**
8 **ETHERNET** ➡ **(p. 15, 54)**
9 **DIGITAL AUDIO OUT** ➡ **(p. 68, 70)**
10 **AV1 IN** ➡ **(p. 68, 70)**
11 **AV2 IN** ➡ **(p. 68 - 71)**

Mains lead and aerial



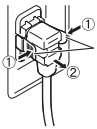
■ Mains lead



Push until both side tabs click

Make sure that the mains lead is securely fixed

To remove from the TV:

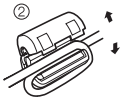


Press both tabs and pull on mains connector to release

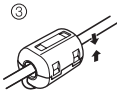
■ Ferrite core U50 series

Installing the Ferrite core

Pull back the tabs (in two places)

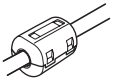


Wind the cable



Close

If it is difficult to wind your cable, set the cable through as shown.



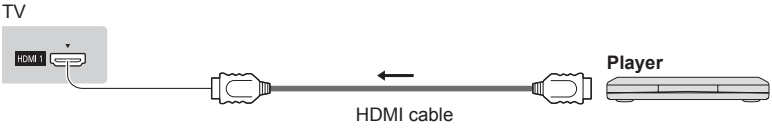
- Take care of the Ferrite core not to move.

Note

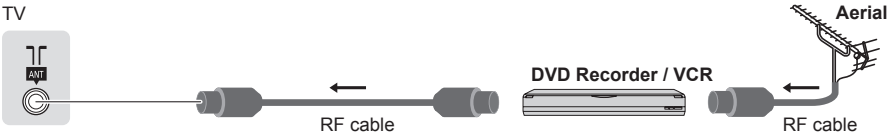
- Keep RF (antenna) cable away from the mains lead to avoid and minimise mains interference pickup.
- Do not place the RF cable under the TV.
- To obtain optimum quality picture and sound, an aerial, the correct cable (75 Ω coaxial), and the correct terminating plug are required.
- If a communal aerial system is used, you may require the correct connection cable and plug between the wall aerial socket and the TV.
- Your local Television Service Centre or dealer may be able to assist you in obtaining the correct aerial system for your particular area and the accessories required.
- Any matters regarding aerial installation, upgrading of existing systems or accessories required, and the costs incurred, are the responsibility of you, the Customer.

AV devices

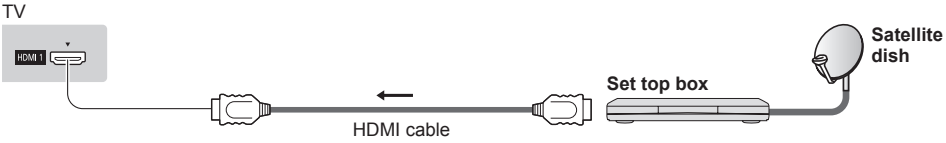
■ Player



■ DVD Recorder / VCR



■ Set top box

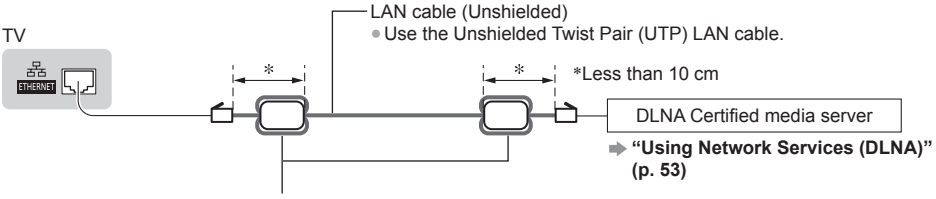


Note

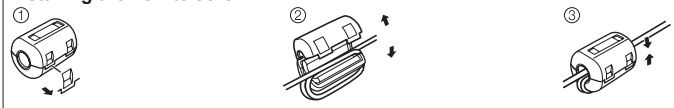
- Check the type of terminals and cable plugs are correct when connecting.
- VIERA Link connection ➡ **(p. 61, 62)**
- Please also read the manual of the equipment being connected.
- Keep the TV away from electronic equipment (video equipment, etc.) or equipment with an infrared sensor. Otherwise, distortion of image / sound may occur or operation of other equipment may be interfered.
- When using a HDMI cable, use the fully wired one.

Network

■ Wired connection



Installing the Ferrite core



Pull back the tabs (in two places) | Wind the cable twice | Close

■ Wireless connection

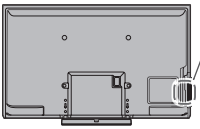
Wireless LAN Adaptor
➡ **"Optional accessories" (p. 6)**
● Connect to the USB port.

➡ **"Using Network Services (DLNA)" (p. 53)**

Auto Tuning

Search and store TV channels automatically.

- These steps are not necessary if the setup has been completed by your local dealer.
- Please complete connections (p. 12 - 15) and settings (if necessary) of the connected equipment before starting Auto Tuning. For details of settings for the connected equipment, read the manual of the equipment.

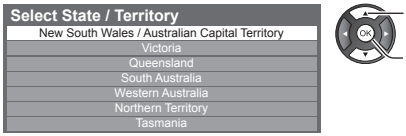


1 Plug the TV into mains socket and switch on

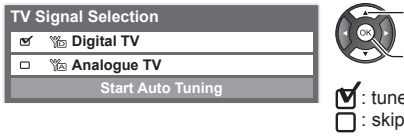
➡ (p. 10, 13)

- Takes a few seconds to be displayed.
- If the red LED shows on the TV, press the Standby On / Off switch on the remote control.

2 Select your area (U50A series)

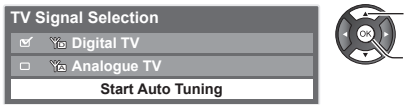


3 Select the mode to tune

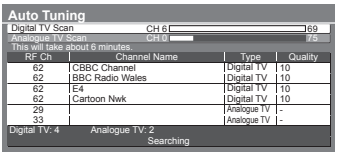


☑: tune (search for the available channels)
☐: skip tuning

4 Select [Start Auto Tuning]



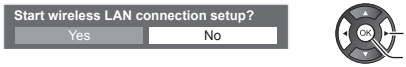
- Auto Tuning will start to search for TV channels and store them.
  The stored channels and sorted channel order vary depending on the area, broadcasting system and conditions of signal reception.



5 Setup the wireless LAN connection

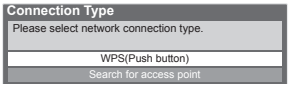
Setup the network connection to use DLNA features. ➡ (p. 53)

- To setup the wireless connection, the Wireless LAN Adaptor (optional accessory) is required. Please note that this TV does not support wireless public access points.
- Ensure the network connections (p. 15) and network environment are completed before starting setup.



- To setup later on or skip this step
  ➡ Select [No]

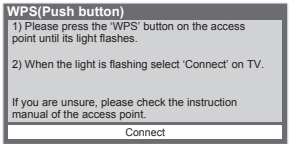
6 Select the connection type



- If your access point supports WPS (Push button), then select this option. If not, select [Search for access point].

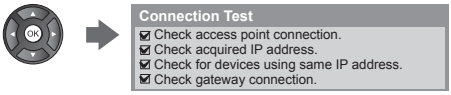
[WPS(Push button)]

1. Press the WPS button on the access point until the light flashes
2. Connect the Wireless LAN Adaptor and the access point


WPS(Push button)
1) Please press the 'WPS' button on the access point until its light flashes.
2) When the light is flashing select 'Connect' on TV.
If you are unsure, please check the instruction manual of the access point.
Connect

- Ensure that your access point supports WPS for this setup.
- WPS: Wi-Fi Protected Setup™
- If the connection has failed, check the settings and positions of your access point. And then, follow the on-screen instructions.

3. After the access point setting is finished, perform the connection test


Connection Test
Check access point connection.
Check acquired IP address.
Check for devices using same IP address.
Check gateway connection.

☑ **: succeeded**
The test is successful and the TV is connected to the network.

☒ **: failed**
Check the settings and connections. And then try again.

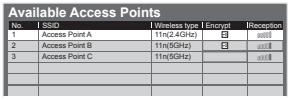
4. Go to the next step **7**

(Press twice)

[Search for access point]

Access points found automatically are listed.

1. Select your desired access point

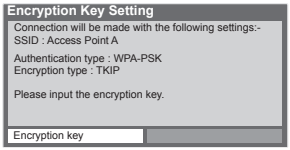


: Encrypted access point

- To search access points again

- For the information of the highlighted access point

2. Access the encryption key input mode


Encryption Key Setting
Connection will be made with the following settings:-
SSID : Access Point A
Authentication type : WPA-PSK
Encryption type : TKIP
Please input the encryption key.
Encryption key

- If the selected access point is not encrypted, the confirmation screen will be displayed. It is recommended to select the encrypted access point.

3. Enter the encryption key of the access point

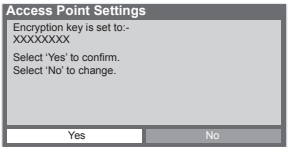
Set characters

Store

- You can set characters by using numeric buttons. ➡**(p. 78)**

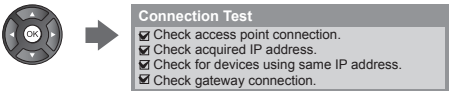
6

4. Select [Yes]



- To re-enter the encryption key, select [No].

5. After the access point setting is finished, perform the connection test



☑ **: succeeded**
The test is successful and the TV is connected to the network.

☒ **: failed**
Check the settings and connections. And then try again.

- To set manually, select [Manual] and set each item.
  For details ➡ **(p. 55)**

6. Go to the next step **7**

(Press twice)

7 Select [Home]

Select [Home] viewing environment to use in your home environment.

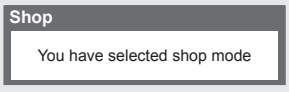
■ [Shop] viewing environment (for shop display only)

[Shop] viewing environment is the demonstration mode to explain main features of this TV.

Select [Home] viewing environment to use in your home environment.

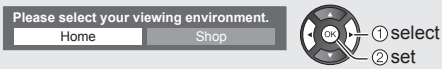
- You can return to viewing environment selection screen at the stage of Shop confirmation screen and Automatic Demo Off / On selection screen.

1 Return to viewing environment selection screen



RETURN

2 Select [Home]



To change viewing environment later on, you will need to initialise all settings by accessing Shipping Condition. ➡ **[Shipping Condition] (p. 42)**

Auto Tuning is now complete and your TV is ready for viewing.

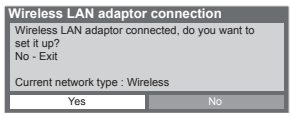
If tuning has failed, check the connection of the RF cable, and then, follow the on-screen instructions.

Note

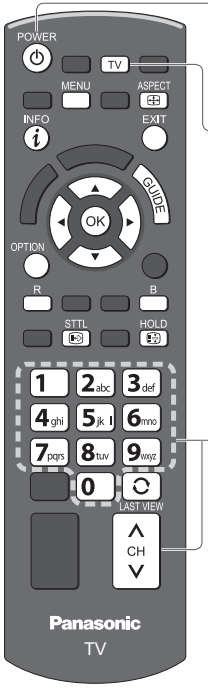
- To check the channel list ➡ **"Using TV Guide" (p. 23) or "Using the Freeview Guide (Digital TV)" (p. 25)**
- To edit or hide (skip) channels ➡ **"Tuning and Editing Channels" (p. 37 - 40)**
- To retune all channels ➡ **[Auto Tuning] in "Tuning and Editing Channels" (p. 39, 40)**
- To add the available TV mode later ➡ **[Add TV Signal] (p. 35)**
- To initialise all settings ➡ **[Shipping Condition] (p. 42)**

If you connect the Wireless LAN Adaptor later on, the confirmation screen will be displayed for the setup.

- To setup the wireless connection ➡ **(p. 55)**


Wireless LAN adaptor connection
Wireless LAN adaptor connected, do you want to set it up?
No - Exit
Current network type : Wireless
Yes
No

Watching TV



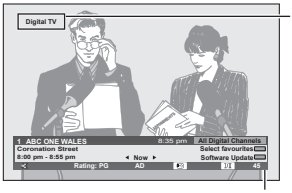
1 Turn power on

POWER

● Mains power On / Off switch should be on. (p. 10)

2 Select Digital TV or Analogue TV mode

TV



The selected mode is displayed.

● You can also select the mode pressing the TV button repeatedly on the TV (p. 10).

Information banner appears whenever you select a channel ➡ **(p. 20)**

3 Select a channel

CH ∧ up / ∨ down

or

● To select a more than two-digit channel position number, e.g. 399

3def 9wxyz 9wxyz

■ To select from the Channel List

All Digital Channels
6 Cartoon Nwk
7 ABC Radio Wales
8 ABC Radio Cymru
1 ABC ONE Wales
2 ABC THREE
3 ABCi
4 ABC Channel

①select channel

②watch

■ To select a channel using Information banner (p. 20)

1 Display Information banner if it is not displayed

INFO

2 While the banner is displayed, select the channel

①select channel

②watch

■ To select a channel using TV Guide (p. 23, 25)

1 Display TV Guide

2 Select the current programme or channel

①select

②watch

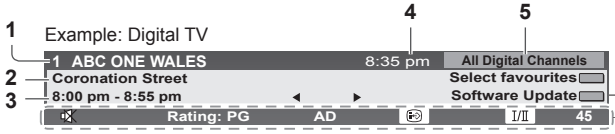
Other useful functions

Display Information banner

Display Information banner

INFO

- Also appears when changing a channel.



1 Channel position and name
2 Programme
3 Programme Start / Finish time (Digital TV)
Channel number, etc. (Analogue TV)
4 Current time
5 Category

Features available / Message meanings

Sound mute on

[Rating]
Rating information ➡ **(p. 73)**

[Bad signal]
Poor TV signal quality

[Encrypted]
Scrambled programme

[AD]
Audio Description service available
- This function can aid visually-impaired viewers by adding an additional audio track to describe events on-screen.
- For settings ➡**(p. 34)**

Subtitle service available

I/II
Multiple image or audio available

Teletext service available
U50Z series / X50Z series

, I, II,
Audio mode ➡ **(p. 73)**

1 - 90
Off Timer remaining time
- For settings ➡**(p. 21)**

- To confirm another tuned channel name

- To watch the channel listed in the banner

- Information on the next programme (Digital TV)

- To hide

EXIT

- Extra information (Digital TV)

INFO
(Press again to hide the banner)

- To set display timeout
➡ **[Banner Display Timeout] (p. 35)**

- To update the TV software (if available)

R

- To select a favourite list (Digital TV)

B if the favourite list is created in [Favourites Edit]
➡ **(p. 37)**

Display subtitles

Display / hide subtitles (if available)

STTL

- To change the language (if available), press the buttons repeatedly.

Hold

Freeze / unfreeze picture

HOLD

Display the selectable settings for the current status

Confirm or change the current status instantly

OPTION

[Audio Description] (Digital TV) U50A series
Set to [Auto] if the programme has Audio Description service, then you will hear an additional audio track to describe events on screen
- To adjust the volume for Audio Description
  ➡ **(p. 34)**

[Video Selection] (Digital TV) U50Z series / X50Z series
Selects the image (if available)

[Audio Selection] (Digital TV) U50A series
Selects between alternative language for sound tracks (if available)

[Audio Selection / AD] (Digital TV)
U50Z series / X50Z series
Selects between alternative languages for sound tracks (if available)

[Dual Audio] (Digital TV)
Selects stereo / monaural (if available)

[Subtitle Language] (Digital TV)
U50Z series / X50Z series
Selects the language in which subtitles should appear (if available)

[MPX] (Analogue TV)
Selects multiplex sound mode (if available)
➡ **(p. 33)**

[Volume Correction]
Adjusts volume of individual channel or input mode

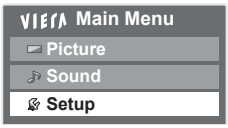
Off Timer

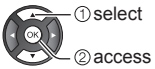
Turn the TV to Standby mode automatically after a fixed period
[Off] / [15] / [30] / [45] / [60] / [75] / [90] (minutes)

1 Display the menu

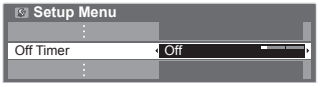
MENU

2 Select [Setup]





3 Select [Off Timer] and set the time in 15-minute increments



- To cancel, set to [Off] or turn the TV off.
- To confirm the remaining time ➡ **"Display Information banner" (p. 20)**
- When the remaining time is within 3 minutes, the remaining time will flash on the screen.

Aspect

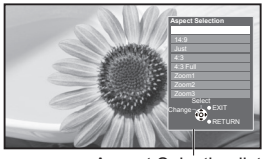
Change the aspect ratio (image size)

ASPECT Enjoy viewing the image at its optimum size and aspect.
(Press repeatedly until you reach the desired mode.)

■ To change the aspect ratio manually (if available)

1 Display Aspect Selection list

ASPECT



Aspect Selection list

2 While the list is displayed, select the mode

- You can also change the mode only using the ASPECT button.

ASPECT

[16:9]

Directly displays the image at 16:9 without distortion (anamorphic).

[14:9]

Displays the image at the standard 14:9 without distortion.

[Just]

Displays a 4:3 image full-screen. Stretching is only noticeable at the left and right edges.

[4:3]

Displays the image at the standard 4:3 without distortion.

[4:3 Full]

Displays a 4:3 image enlarged horizontally to fit the screen.
- For Digital TV or HD signal U50A series

[Zoom1]

Displays a 16:9 letterbox or 4:3 image without distortion.

[Zoom2]

Displays a 16:9 letterbox (anamorphic) image full-screen without distortion.

[Zoom3]

Displays a 2.35:1 letterbox (anamorphic) image full-screen without distortion.
At 16:9, displays the image at its maximum (with slight enlargement).

Note

- Only [16:9] and [4:3 Full] are available in Digital TV. U50A series
- Aspect is fixed to [16:9] in Digital TV. U50Z series / X50Z series
- Only [16:9] and [4:3] are available in PC input mode.
- Aspect is fixed to [16:9] when [Viewing Mode] is set to [Game] in the Picture Menu.
- Aspect cannot be changed in teletext service. U50Z series / X50Z series
- Aspect mode can be memorised separately for SD (Standard definition) and HD (High definition) signals except in Digital TV.

Last view

Switch to previously viewed channel or input mode easily

LAST VIEW

- Press again to return to the current view.

Note

- Watching less than 10 seconds is not regarded as the previously viewed channel or input mode.

Standard Time / Summer Time U50A series

■ Region Select - Adjust the standard time

Select the region where you live to adjust the standard time.

- The time contained in the broadcast signal is UTC (Universal Time coordinated) formally known as GMT (Greenwich Mean Time).

■ Daylight Saving Time - Adjust for Summer Time

Select time offset from the standard time for Summer Time.

- Normally select [Auto].
- If there is a gap between displayed time and actual time, set this function.

Region	Standard time	Daylight Saving Time : Auto (During Summer Time)
NSW / ACT	+10:00	+11:00
Victoria		
Queensland	+10:00	
South Australia	+9:30	+10:30
Western Australia	+8:00	
Northern Territory	+9:30	
Tasmania	+10:00	+11:00

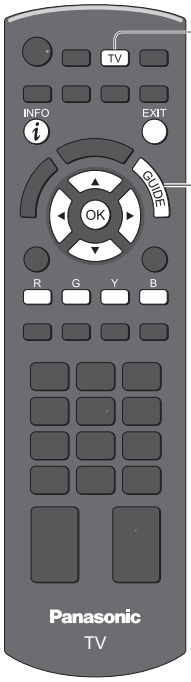
- These items can be set from [Other Settings] in the Setup Menu. (p. 36)

(Based on GMT)

Using TV Guide U50A series

TV Guide - Electronic Programme Guide (EPG) provides an on-screen listing of the programmes currently broadcast and the forthcoming broadcasts over the next seven days (depending on the broadcasters).

- Digital TV and Analogue TV channels are displayed on the same TV Guide screen. [D] means Digital TV channel and [A] means Analogue TV channel. There will be no programme listings for Analogue channels.
- When this TV is turned on for the first time, or the TV is switched off for more than a week, it may take some time before TV Guide is completely shown.



1 Select the mode

➡ (p. 19)

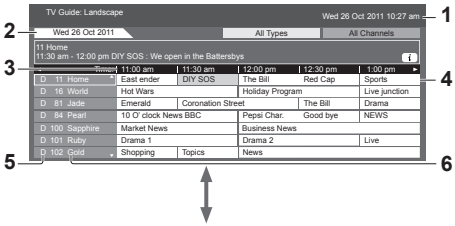
TV

2 View TV Guide

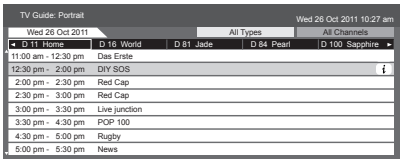
GUIDE

- Press again to change the layout ([Landscape] / [Portrait]).
  View [Landscape] to see several channels.
  View [Portrait] to see one channel by time.

Example: [Landscape]



Example: [Portrait]



1 Current date and time
2 TV Guide date
3 TV Guide time
4 Programme
5 [D]: Digital TV
  [A]: Analogue
6 Channel position and name

■ To return to TV

EXIT

■ To watch the programme

Select the current programme or channel

■ **To the previous day** (Digital TV)

R

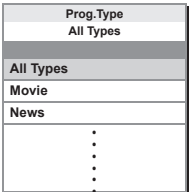
■ **To the next day** (Digital TV)

G

■ **To view a channel list of the selected type** (Digital TV)

Y

(Type list)



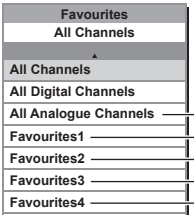
①select type

②view

■ **To view a channel list of the selected category**

B

(Category list)



①select category

②view

Only Analogue channels are listed

● To list favourite channels
➡ **(p. 37)**

Other useful functions

View details of the programme (Digital TV)

1 Select the programme

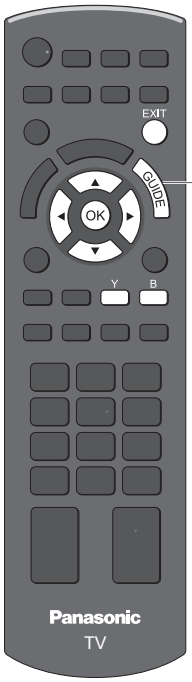
2 View details

INFO

● Press again to return to TV Guide.

Using the Freeview Guide (Digital TV) U50Z series / X50Z series

Using the Freeview Guide enables you to select a programme easily, view programme information, etc.
The Freeview Guide - Electronic Programme Guide (EPG) provides an on screen listing of the programmes currently broadcast and the future broadcasts over the next seven days (depending on the broadcasters).



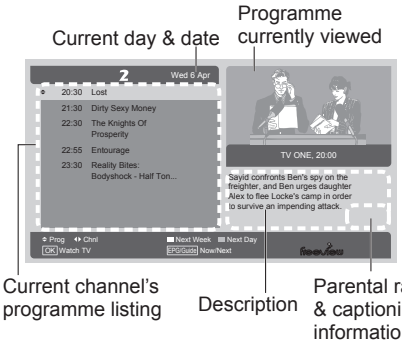
■ **To return to TV**

EXIT

View the Freeview Guide

Each time pressed, the screen will be switched between the Freeview Guide Listing and What's on Now / Next.

Example: Freeview Guide Listing


Programme currently viewed
Current day & date
2
Wed 6 Apr
20:30 Lost
21:30 Dirty Sexy Money
22:30 The Knights Of Prosperity
22:55 Entourage
23:30 Reality Bites: Bodyshock - Half Ton...
TV ONE, 20:00
Sayid confronts Ben's spy on the freighter, and Ben urges daughter Alex to flee Locke's camp in order to survive an impending attack.
Prog Chnl
Next Week Next Day
OK Watch TV
EPGGuide Now/Next
Current channel's programme listing
Description
Parental rating & captioning information

Example: What's on Now / Next

Current time & date
What's on now/next.
20:00 Wed 6 Apr
2 TV2 Now 20:30 Lost
Next 21:30 Dirty Sexy Money
3 TV3 Now 20:30 Criminal Intent
Next 21:30 Law & Order
4 C4 Now 20:30 Celebrity Joker Poker
Next 21:30 It's Always Sunny In Philadelp...
5 Māori Television Now 20:30 NZ Doco: Children of the Revol...
Next 21:30 Te Tepu
6 TVNZ6 Now 20:30 Talk Talk
Next 21:30 The Gravy
Chnl
OK Watch TV
EPGGuide Listings
Channel listing

■ **To the previous day** ➡ Y

■ **To the next day** ➡ B

■ **To scroll through programme or channel**

➡

■ **To watch the highlighted programme**

➡

■ **To scroll through channels**

➡

■ **To watch the highlighted programme**

➡

■ **To return to the Freeview Guide Listings**

➡

Note

- When this TV is turned on for the first time, or the TV is switched off for more than a week, it may take some time before the Freeview Guide is completely shown.
- The Freeview Guide screen and operations are subject to change without notice.

Viewing Teletext U50Z series / X50Z series

Teletext services are the text information provided by the broadcasters.
The features may vary depending on the broadcasters.

What is FASTEXT mode?

In FASTEXT mode, four differently coloured subjects are situated at the bottom of the screen. To access more information about one of these subjects, press the appropriate coloured button. This facility enables fast access to information on the subjects shown.

What is List mode?

In List mode, four differently coloured page numbers are situated at the bottom of the screen. Each of these numbers can be altered and stored in the TV's memory. ➡ **"Store frequently viewed pages" (p. 27)**

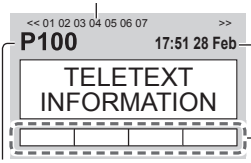
■ **To change mode** ➡ **[Teletext] (p. 35)**

1 Switch to Teletext

TEXT

- Displays the index page (content varies depending on the broadcasters).

Sub page number



Current page number

2 Select the page

1 2abc 3def / 4ghi 5jkl 6mno / 7pqrs 8tuv 9wxyz / 0

or

or Coloured button
(Corresponds to the colour bar)

■ **To adjust contrast**

MENU

(Press three times)

➡ As the blue bar is displayed

■ **To return to TV**

EXIT

Reveal hidden data

Reveal hidden words e.g. quiz page answers

MENU ➡ R

- Press again to hide.

INDEX

Return to the main index page

INDEX

HOLD

Stop automatic updating

HOLD (If you wish to hold the current page without updating)

- Press again to resume.

Call up a favourite page

View a favourite page stored

Call up the page stored on the blue button (List mode).

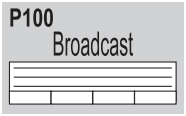
STTL

- Factory setting is "P103".

FULL / TOP / BOTTOM

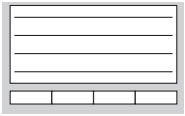
MENU → G

(TOP)



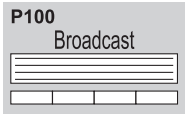
(Expand the TOP half)

(BOTTOM)



(Expand the BOTTOM half)

Normal (FULL)



View in multi window

Watch TV and Teletext in two windows at once

MENU (Press twice) → Select Picture and text on or off

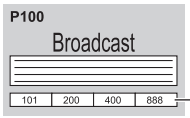
- Operations can be made only in teletext screen.

Store frequently viewed pages

Store frequently viewed pages in the colour bar (List mode only)

As page is displayed

(Corresponding coloured button) → press and hold



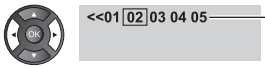
The number changes to white.

■ To change stored pages

Coloured button you want to change → Enter new page number → press and hold

View sub page

View sub page (Only when Teletext is more than one page)



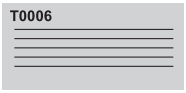
Appears at top of the screen

- The number of sub pages varies depending on the broadcasters.
- It may take some time for searching, during which time you can watch TV.

■ To view specific sub page

MENU → B

Enter the 4-digit number
Example: P6
0 0 0 6



Watch TV while waiting for update

View the TV picture while searching for a teletext page

Teletext automatically updates itself when new information becomes available.

MENU → Y →

Changes to TV screen temporarily

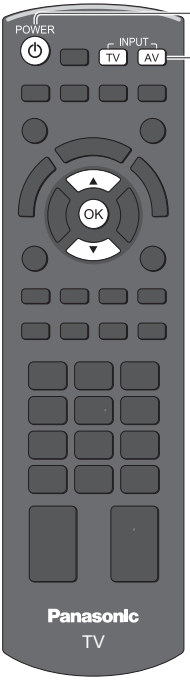
Appears when updating is completed → View the updated page → Y

(You cannot change the channel.)

- The news page provides a function that indicates arrival of the latest news (“News Flash”).

Watching External Inputs

Connect the external equipment (VCRs, DVD equipment, etc.) and you can watch through the input.
- To connect the equipment ➡ **(p. 12 - 15, 68 - 72)**



1 Turn the TV on

POWER

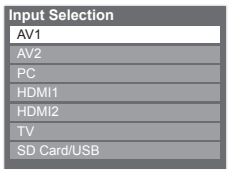
If input mode is not switched automatically

Perform 2 and 3
- Check the setup of the equipment.

2 Display the input selection menu

AV

3 Select the input mode connected to the equipment



- You can also select the input using the AV button on the remote control or the TV (except [SD Card/USB]).
  Press the button repeatedly until the desired input is selected.
- [SD Card/USB]: Switches to Media Player. ➡ **"Using Media Player" (p. 45)**
- You can label or skip each input mode (except [SD Card/USB]).
  ➡ **"Input Labels" (p. 35)**
  Skipped inputs will not be displayed when the AV button is pressed.

4 View

Displays the selected mode

■ To return to TV

TV

Note
- If the external equipment has an aspect adjustment function, set it to [16:9].
- For details, read the manual of the equipment or ask your local dealer.

How to Use VIERA TOOLS

You can access some special features easily by using the VIERA TOOLS function.

1 Display icons of the feature

VIERA TOOLS

2 Select a feature

■ **To return to TV**

EXIT or VIERA TOOLS

■ **Follow the operations of each feature**

[VIERA Link]
➡ **(p. 65 - 67)**

[Photo]*
➡ **(p. 47)**

[Video]*
➡ **(p. 50)**

[Music]*
➡ **(p. 52)**

[Media Server]*
➡ **(p. 57)**

*When two or more available devices are connected, a selection screen will be displayed.
Please select the correct description and access.

Note

- If the selected feature is not available, the demonstration to explain how to use it can be displayed. Press the OK button to view the demonstration after selecting the unavailable feature.

How to Use Menu Functions

Various menus allow you to make settings for the picture, sound, and other functions.

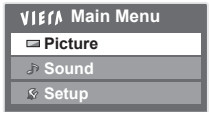
1 Display the menu

MENU

- Displays the functions that can be set (varies according to the input signal).

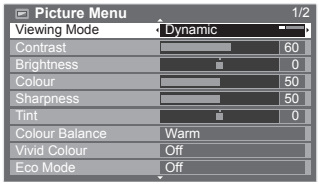
2 Select the menu

Example: [Picture Menu]



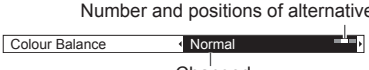
3 Select the item

Example: [Picture Menu]



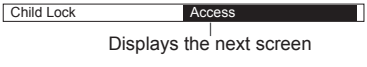
■ Choose from among alternatives

Number and positions of alternatives



■ Adjust using the slide bar

■ Go to the next screen



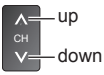
■ To return to TV at any time

EXIT

■ To return to the previous screen

RETURN

■ To change menu pages



■ Enter characters by free input menu

You can enter names or numbers freely for some items.

Set characters one by one

Store

- You can set characters by using numeric buttons.
  ➡ **"Characters table for numeric buttons" (p. 78)**

■ To reset the settings

- Picture or sound settings only
  ➡ **[Reset Picture Defaults] in the Picture Menu (p. 32) or [Reset Sound Defaults] in the Sound Menu (p. 34)**
- To initialise all settings ➡ **[Shipping Condition] (p. 42)**

Menu list

Menu	Item	Adjustments / Configurations (alternatives)
Picture	**Viewing Mode**	Selects your favourite picture mode for each input **[Dynamic] / [Normal] / [Cinema] / [True Cinema] / [Game]** **[Dynamic]:** Improves contrast and sharpness for viewing in a bright room. **[Normal]:** Normal use for viewing in a normal lighting condition. **[Cinema]:** Improves the performance of contrast, black and colour reproduction for watching movies in a darkened room. **[True Cinema]:** Reproduces the original image quality precisely without any revision. **[Game]:** Provides suitable images for fast response signal when playing games. ● Not valid on TV mode ● To display a continuous record of time spent using Game mode ➡ [Playing Time Display] (p. 35)
		In each Viewing Mode, [Contrast], [Brightness], [Colour], [Sharpness], [Tint], [Colour Balance], [Vivid Colour], [Eco Mode], [P-NR] and [3D-COMB] can be adjusted and stored for each input.
	Contrast, Brightness, Colour, Sharpness	Adjusts the levels of these options according to your personal preference
	Tint	Adjusts the picture hue to suit your taste ● For NTSC signal, Component and HDMI input
	Colour Balance	Sets the overall colour tone of the picture **[Cool] / [Normal] / [Warm]** ● Not valid when [Viewing Mode] is set to [True Cinema]
	Vivid Colour	Automatically adjusts colours to vivid ones **[Off] / [On]** ● Not valid on PC mode
	Eco Mode	Automatic Brightness Control function Adjusts picture settings automatically depending on ambient lighting conditions **[Off] / [On]**
	P-NR	Picture Noise Reduction Reduces unwanted picture noise and flicker noise in the contoured parts of a picture **[Off] / [Min] / [Mid] / [Max]** ● Not valid on PC mode
	3D-COMB	Makes still or slow moving pictures more vivid **[Off] / [On]** ● Occasionally, while viewing still or slow moving pictures, colour patterning may be seen. Set to [On] to display sharper and more accurate colours. ● For PAL / NTSC signal reception in TV mode or from composite

Menu	Item		Adjustments / Configurations (alternatives)
Picture	Screen Display		Turns the screen off when you select [Off] **[Off] / [On]** ● The sound is active even if the screen turns off. ● Press any buttons (except Standby) to turn the screen on. ● This function is effective in reducing power consumption when listening to the sound without watching the TV screen.
	Advanced Settings	**Refresh Rate**	Changes the image processing of the panel (depending on the input signal) **[50Hz] / [100Hz]** ● Set to [100Hz] normally
		Side Panel	Adjusts the brightness of the side panel **[Off] / [Low] / [Mid] / [High]** ● The recommended setting is [High] to prevent panel “image retention”.
		16:9 Overscan	Selects the screen area displaying the image **[Off] / [On]** **[On]:** Enlarges the image to hide the edge of the image. **[Off]:** Displays the image in the original size. ● Set to [On] if noise is generated on the edge of the screen. ● This function is available when aspect is set to [16:9]. ● This function can be memorised separately for SD (Standard definition) and HD (High definition) signals. ● Not valid on PC mode
		DVI Input Setting	Changes the black level of the image for HDMI input mode with DVI input signal manually **[Normal] / [Full]** ● When the DVI input signal from the external equipment (especially from PC) is displayed, the black level may not be suitable. In this case, select [Full]. ● The black level for HDMI input signal will be adjusted automatically. ● For HDMI input mode with DVI input signal
		Pixel Orbiter	Selects the mode for wobbling of the image to prevent panel “image retention” **[Auto] / [On]** **[Auto]:** Automatically works only for the appropriate images and you rarely recognise the wobbling.
		Scrolling Bar	Displays scrolling bar pattern to assist elimination of panel “image retention” ● Press the OK button to start scrolling and press any buttons (except Standby) to exit this mode. ● For positive effect to eliminate “image retention”, it may be necessary to display for a long time.
	Reset Picture Defaults		Press the OK button to reset the current Picture Viewing Mode of the selected input to the default settings

Menu	Item	Adjustments / Configurations (alternatives)
Sound	**Mode**	Selects your favourite sound mode **[Music] / [Speech] / [User]** ● The selected mode affects all input signals. **[Music]:** Improves sound quality for watching music videos, etc. **[Speech]:** Improves sound quality for watching news, drama, etc. ● In Music and Speech modes, you can adjust [Bass] and [Treble] settings, and those settings will be stored for each mode. **[User]:** Adjusts the sounds manually by using the equaliser to suit your favourite sound quality. ● For the User mode, [Equaliser] will appear on the Sound Menu instead of [Bass] and [Treble]. Select [Equaliser] and adjust the frequency. ➡ [Equaliser] (see below)
	Bass	Adjusts level to enhance or minimise lower, deeper sound output
	Treble	Adjusts level to enhance or minimise sharper, higher sound output
	Equaliser	Adjusts the frequency level to suit your favourite sound quality ● This function is available when [Mode] is set to [User]. ● Select the frequency and change the frequency level by using the cursor button. ● To enhance the bass sound, raise the level of the lower frequency. To enhance the treble sound, raise the level of the higher frequency. ● To reset the levels of each frequency to the default settings, select [Reset Equaliser Settings] by using the cursor button, and then press the OK button.
	Balance	Adjusts volume level of right and left speakers
	Headphone Volume	Adjusts the volume of the headphones
	Surround	Surround sound settings **[Off] / [V-Audio] / [V-Audio Surround]** **[V-Audio]:** Provides a dynamic enhancer of width to simulate improved spatial effects. **[V-Audio Surround]:** Provides a dynamic enhancer of width and depth to simulate improved spatial effects. ● Switching is also possible by the SURROUND button on the remote control (p. 9)
	Auto Gain Control	Automatically regulates large sound level differences between channels and inputs **[Off] / [On]**
	Volume Correction	Adjusts the volume of individual channel or input mode
	Speaker Distance to Wall	Compensates for the low frequency sound due to the distance between the speakers and the wall **[Over 30cm] / [Up to 30cm]** ● If the back space between the TV and wall is over 30 cm, [Over 30cm] is recommended. ● If the back space between the TV and wall is within 30 cm, [Up to 30cm] is recommended.
	Preferred Audio Language U50Z series / X50Z series	Selects the preferred language for digital TV multi audio (depending on the broadcaster) **[English] / [Maori] / [French] / [German] / [Italian] / [Spanish] / [Korean] / [Chinese-Mandarin] / [Chinese-Cantonese] / [Japanese] / [Hindi]**
	MPX	Selects multiplex sound mode (if available) (p. 73) **[Stereo]:** Use this normally. **[Mono]:** When stereo signal cannot be received. **[M1] / [M2]:** Available while mono signal is transmitted. ● For Analogue TV

Menu	Item		Adjustments / Configurations (alternatives)
Sound	**Digital Audio Preference** U50A series		Selects the initial setting for audio tracks **[Dolby D] / [MPEG]** **[Dolby D]:** The priority is given to Dolby Digital. **[MPEG]:** The priority is given to MPEG. ● Dolby Digital is the method of coding digital signals developed by the Dolby Laboratories. Apart from stereo (2ch) audio, these signals can also be multi-channel audio. ● MPEG is an audio compression method that compresses audio to the smaller size without any considerable loss of audio quality. ● For Digital TV
	Digital Audio Preference U50Z series / X50Z series		Selects the initial setting for audio tracks **[Dolby D] / [HE-AAC]** **[Dolby D]:** The priority is given to Dolby Digital. **[HE-AAC]:** The priority is given to HE-AAC. ● Dolby Digital is the method of coding digital signals developed by the Dolby Laboratories. Apart from stereo (2ch) audio, these signals can be multi-channel audio. ● HE-AAC is a perceptual coding method used to compress digital audio for efficient storage and transmission. ● For Digital TV
	SPDIF Selection		SPDIF: A standard audio transfer file format Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT and HDMI2 (ARC function) terminals **[Auto]** / **[PCM]** **[Auto]**: Dolby Digital is output as Dolby Digital Bitstream. HE-AAC and MPEG are output as PCM. **[PCM]:** Digital output signal is fixed to PCM. ● For Digital TV or video contents of Media Player / Network services (p. 60) ● ARC (Audio Return Channel): A function of digital audio output using HDMI cable
	PCM Optical Level		Adjusts the audio level of PCM output from DIGITAL AUDIO OUT and HDMI2 (ARC function) terminals as the initial setting **[-12] / [-10] / [-8] / [-6] / [-4] / [-2] / [0] (dB)** ● Normally, PCM sound is larger comparing with the other types of audio track. ● For Digital TV
	HDMI1 / 2 Input		Selects to fit the input signal **[Digital] / [Analogue]** (p. 77) **[Digital]:** When sound is carried via the HDMI cable connection **[Analogue]:** When sound is not carried via the HDMI-DVI adaptor cable connection ● For HDMI input
	Audio Description Menu U50A series	**Audio Description**	Narration settings for visually impaired users **[Off] / [Auto]** Set to [Auto] to activate the narration sound track when available on the broadcast. ● The availability of audio description sound track is indicated by [AD] in the information banner (p. 20). ● For Digital TV
		Volume	Adjusts the volume for Audio Description ● For Digital TV
		Speakers	Set to [On] to activate the description sound track from TV speakers **[Off] / [On]** ● For Digital TV
		Headphones	Set to [On] to activate the description sound track from headphones **[Off] / [On]** ● For Digital TV
	Audio Description U50Z series / X50Z series		Narration settings for visually impaired users **[Off] / [Auto]** Set to [Auto] to activate the narration sound track when available on the broadcast. ● The availability of audio description sound track is indicated by [AD] in the information banner (p. 20). ● For Digital TV
	Reset Sound Defaults		Press the OK button to reset the current Sound Mode, [Balance], [Headphone Volume] and [Surround] to the default settings

Menu	Item		Adjustments / Configurations (alternatives)
Setup	**Off Timer**		Sets the duration of time until the TV automatically goes into Standby mode **[Off] / [15] / [30] / [45] / [60] / [75] / [90] (minutes)** (p. 21)
	Eco Navigation		Automatically sets the TV to the most suitable energy-saving mode ● If you press the OK button, the following items are set as below: [Eco Mode], [VIERA Link], [Power off Link], [Standby Power Save], [Power Save] ➡ [On] [Intelligent Auto Standby] ➡ [On (No reminder)] [Auto Standby] ➡ [2 hours]
	Child Lock		Applies access control for channels or inputs to prevent unwanted access (p. 41)
	Tuning Menu*	**Favourites Edit**	Creates a list of favourite channels (p. 37) ● For Digital TV
		Channel List	Skips the unwanted channels or edits channels (p. 38)
		Auto Tuning	Automatically searches for the receivable channels (p. 39)
		Manual Tuning	Searches for the channels manually (p. 39)
		Update Channel List	Updates the channel list while keeping your settings (p. 40) ● For Digital TV
		New Channel Message U50A series	Selects whether to give a notification message when a new channel is found **[Off] / [On]** (p. 40) ● For Digital TV
		Signal Condition	Checks the signal condition (p. 40) ● For Digital TV
		Add TV Signal	Adds the TV mode ● This function is available if you skip any modes to tune in [Auto Tuning] for first using the TV. ● To operate, refer to the “Auto Tuning” operations for first using the TV (p. 16).
	Display Settings	**Teletext** U50A series	This item is not used for this model.
		Teletext U50Z series / X50Z series	Teletext display mode **[FASTEXT]** / **[List]** (p. 26)
		Preferred Subtitles U50Z series / X50Z series	Selects the preferred language for Digital TV subtitles (depending on the broadcaster)
		Input Labels	Accesses the input labels list to select the label of each input mode or set to skip unconnected one for easier identification and selection in [Input Selection] (p. 28) or banner ● To name each input mode freely, select [User input] and set characters (maximum 10 characters). ● To skip the input mode, select [Skip].
		Banner Display Timeout	Sets how long the Information banner stays on screen **[0 (No display)] / [1] / [2] / [3] / [4] / [5] / [6] / [7] / [8] / [9] / [10] (seconds)**
		Playing Time Display	Set to [On] to display a continuous record of time spent using Game mode in the top right of the screen every 30 minutes **[Off] / [On]** ● This function is available when [Viewing Mode] is set to [Game]. ➡ (p. 31)

Menu		Item	Adjustments / Configurations (alternatives)
Setup	VIERA Link Settings	**VIERA Link**	Sets to use VIERA Link functions **[Off] / [On]** (p. 63)
		Power on Link	Sets to use Power on Link functions **[Off] / [On]** (p. 63)
		Power off Link	Sets to use Power off Link functions **[Off] / [On]** (p. 63)
		Standby Power Save	Controls the connected equipment to reduce power consumption in Standby **[Off] / [On]** (p. 64) ● This function is available when [VIERA Link] is set to [On] and [Power off Link] is set to [On].
		Intelligent Auto Standby	Makes non-watched or non-used connected equipment go into Standby mode to reduce the power consumption **[Off] / [On (With reminder)] / [On (No reminder)]** (p. 64) ● This function is available when [VIERA Link] is set to [On].
	Network Setup	**Connection Test, Network Type, Access Point Settings, IP/DNS Settings**	Sets the network setting to use in your network environment (p. 55)
		Software Update U50Z series / X50Z series	Checks for available software updates from Panasonic website
		MAC Address	Displays the MAC address of this TV
	DivX® VOD		Displays DivX VOD registration code (p. 75)
	System Menu	**Shipping Condition**	Resets all settings to the original condition (p. 42)
		System Update	Downloads new software to this TV (p. 43)
		Software Licence	Displays the software licence information
		System Information	Displays the system information of this TV
	Other Settings	**Auto Standby**	Sets the duration of time that the TV will remain on when no operation is performed **[Off] / [2] / [4] (hours)** ● Automatic input switching with the connected equipment affects this function and time-count will be reset. ● The notification message will appear 3 minutes before going into Standby mode.
		Power Save	Reduces brightness of the picture to economise on power consumption **[Off] / [On]**
		Region Select U50A series	Selects the region where you live to adjust the standard time **[NSW / ACT] / [Victoria] / [Queensland] / [South Australia] / [Western Australia] / [Northern Territory] / [Tasmania]** (p. 22)
		Daylight Saving Time U50A series	Selects time offset from the standard time for Summer Time **[Auto] / [Off] / [+ 1/2 hour] / [+ 1 hour]** (p. 22)

∗ The settings in [Tuning Menu] are applicable only for the selected TV mode. The menu name varies depending on the TV mode. ([Digital TV Tuning Menu] / [Analogue TV Tuning Menu])
● A different menu will be displayed in the mode of PC input or Media Player (p. 44, 46 - 52).
● Only available items can be selected.

Tuning and Editing Channels

You can retune channels or make your favourite channel lists, skip unwanted channels, etc.

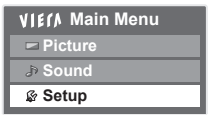
1 Select the mode

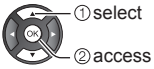
(p. 19)

TV

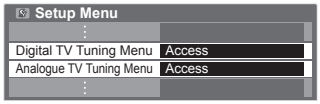
2 Display the menu and select [Setup]

MENU



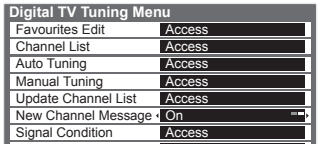


3 Select [Digital TV Tuning Menu] or [Analogue TV Tuning Menu]



- The displayed item depends on the selected mode.

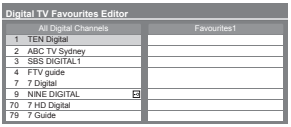
4 Select one of the following functions



List favourite Digital TV channels [Favourites Edit] (Digital TV)

Create your favourite channel lists from various broadcasters (up to 4: [Favourites] 1 to 4).
The Digital TV Favourites lists are available from “Category” in the Information banner (p. 20) and the TV Guide screen (p. 23).

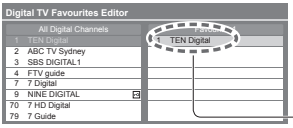
1 Select a channel to list (: Encrypted channel)



- To display other Favourites

G

2 Add it to the Favourites list



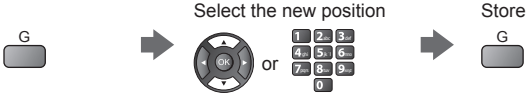
- To add all channels to the list

Y

■ To edit Favourites list

While the cursor is in the Favourites field to edit

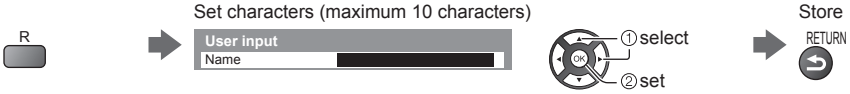
- To move the channel



- To delete the channel

- To delete all channels

- To name the Favourites



- To use numeric buttons
  ➡ **(p. 78)**

3 Store

Note

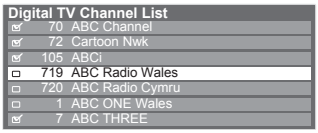
- Channel numbers are defined by the broadcaster and cannot be changed.
- Hidden channels (see below) can be selected but not viewed.

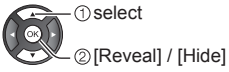
Skip unwanted channels, Edit Channels [Channel List]

You can hide (skip) unwanted channels.
The hidden channels cannot be displayed except in this function.

Select a channel and reveal / hide

Example: Digital TV





☑ : [Reveal]
☐ : [Hide] (skip)

- To reveal all channels

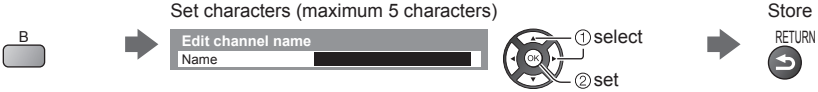
■ To edit channels

- To swap / move the channel position (if available)

Example: Analogue TV

- To retune each channel ([Manual Tuning] (p. 39))

- To rename the channel name (Analogue TV)



- To use numeric buttons
  ➡ **(p. 78)**

Note

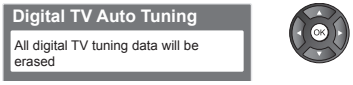
- If a VCR is connected only with the RF cable in Analogue TV, edit [VCR].

Set all channels automatically [Auto Tuning]

Automatically retune all channels received in the area.

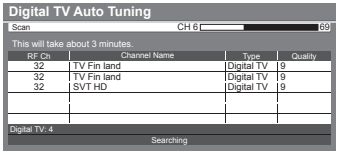
1 Start Auto Tuning

Example: Digital TV



2 Settings are made automatically

Example: Digital TV

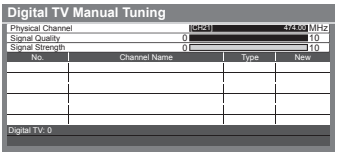


- All the previous tuning settings are erased.
- When the operation is completed, the channel at the lowest position will be displayed.
- Search begins in the order from the lower channels to the higher channels.
- If tuning has not been done completely ➡ **[Manual Tuning] (see below)**

Set Digital TV channel manually [Manual Tuning]

Normally use [Auto Tuning] or [Update Channel List] to retune Digital TV channels.
If tuning has not been done completely or for adjusting the direction of the aerial or dish, use this function.

- All channels found will be added to the Channel List.



① select physical channel
② select offset
③ start tuning

Set Analogue TV channel manually [Manual Tuning]

Set Analogue TV channel manually after Auto Tuning.

- If a VCR is connected only with the RF cable, select channel position [0].

1 Select the channel position

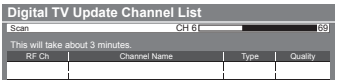
2 Select the channel

3 Search and store

① search
② store

Update Digital TV channel automatically [Update Channel List] (Digital TV)

You can add new channels, delete removed channels, update channel name and position automatically to the channel list.



- The channel list is updated while keeping your settings in [Favourites Edit], [Channel List], [Child Lock], etc.
- Depending on the signal condition, the update may not work properly.

Display a notification message [New Channel Message] (Digital TV) U50A series

Selects whether to give a notification message when a new Digital TV channel is found.

New channels found!
Press OK to update channel list.
Press EXIT to ignore.

- Selecting OK will perform [Update Channel List].
- Sometimes, mainly during summer months at night, the TV may pickup distant TV stations outside your broadcast due to favourable short term ionosphere conditions. In such circumstances when you press OK button, the TV does not add any new channels. This is normal.

Check Digital TV signal [Signal Condition] (Digital TV)

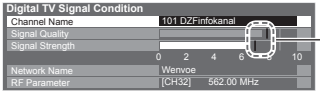
Selects a channel and checks the Digital TV signal condition.

A good Signal Strength is not an indication of suitable signal for Digital TV reception.
Use the Signal Quality indicator as follows.

- Green bar: Good
- Yellow bar: Poor
- Red bar: Bad (Check the aerial)

- To change the channel

Example:



These bars show the maximum signal value of the selected channel.

Auto Tuning using the buttons on the TV

For Auto Tuning, using the buttons on the TV (p. 10)

1 Press the F button repeatedly until [Auto Tuning] appears

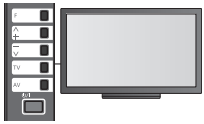
F

2 Access [Auto Tuning]

TV

3 Start [Auto Tuning]

TV



- To return to TV

F

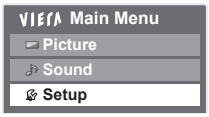
- Control panel OSD appears when pressing the control panel button.

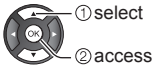
Child Lock

You can lock specific channels / AV input terminals and control who watches them.
When the locked channel / input is selected, a message appears. Enter the PIN number to watch.

1 Display the menu and select [Setup]

MENU





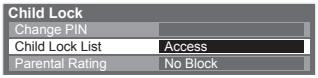
2 Select [Child Lock]

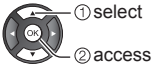
Control channel audience [Child Lock]

1 Enter the PIN number (4 digits)

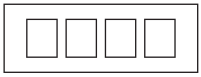
- Enter the PIN number twice at first setting.
- "0000" has been stored as the default PIN number.

2 Select [Child Lock List]

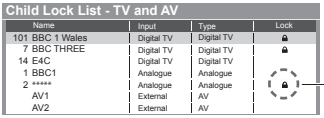




- Make a note of the PIN number in case you forget it.



3 Select the channel / input to be locked



: Appears when the channel / input is locked

- To cancel
  Select the locked channel / input

- To cancel all locks

Y

- To lock all

G

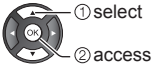
- To jump to the top of the next input

B

- In Digital TV, additional lock item will appear. U50Z series / X50Z series
  [Freeview Players]: Applies access control for some MHEG services.

■ To change the PIN number

1. Select [Change PIN]



2. Enter a new PIN number twice

■ To set Parental Rating

To watch the Digital TV programme that has the rating information over the selected age, enter the PIN number to watch (depending on the broadcaster).
Select [Parental Rating] and set an age for the restriction of programmes.

- Rating ➡ **(p. 73)**

Note

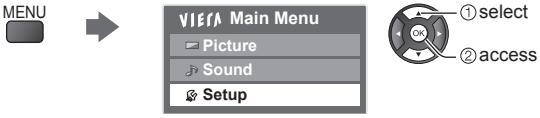
- Setting [Shipping Condition] (p. 42) erases the PIN number and all settings.
- If you have forgotten your changed PIN, input "6969" as the PIN number.

Shipping Condition

Resets the TV to its original condition, i.e. no channels tuned in.
All settings are reset (channels, picture, sound settings, etc.).

- To retune TV channels only, e.g. after moving house
  ➡ **[Auto Tuning] in "Tuning and Editing Channels" (p. 39, 40)**

1 Display the menu and select [Setup]

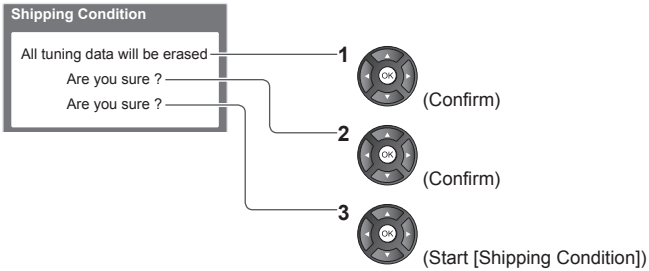


2 Select [System Menu]

3 Select [Shipping Condition]

Restore Settings [Shipping Condition]

1 Check the message and initialise



2 Follow the on-screen instructions

Reset to Factory Shipping Condition
Completed.
TV will automatically restart.
Do not turn off

- [Auto Tuning] will automatically start. (p. 16)

Updating the TV Software

A new version of software may be released for download to enhance the performance or operations of the TV.
If there is an update available, a notification message is displayed when the channel has the update information.

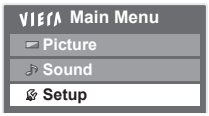
- To download

(Press the EXIT button not to download)

You can update new software automatically or update manually.

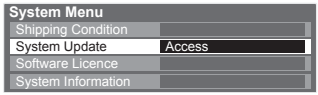
1 Display the menu and select [Setup]

MENU



2 Select [System Menu]

3 Select [System Update]



Update TV's software system [System Update]

■ To update automatically

Select [Auto Update Search in Standby]

- Every time you set, the TV automatically performs a search in Standby and downloads an update, if any software updates are available.
- The automatic updating is performed under the following conditions:
  - Standby (TV turned off with the remote control)

If System Update is performed, the software will be updated (it may change TV functions).
If you do not want to do so, set [Auto Update Search in Standby] to [Off].

■ To update immediately

1 Select [System Update Search Now]

2 Searches for an update (for several minutes) and displays a corresponding message if any

Note

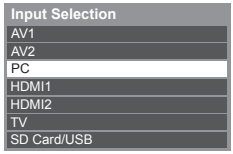
- Download may take for about 60 minutes.
- During software download and update, DO NOT switch off the TV.
- The notification message might be a reminder. In this case, the schedule information (the date that the new version can be used) will appear. You can set the reservation for update. The update will not start when the TV is off.

Displaying PC Screen on TV

The screen of the PC connected to the TV can be displayed on the TV.
You can also listen to PC sound with the audio cable connected.
- To connect PC ➡ **(p. 69, 71)**

1 Select the external input and select [PC]

AV ➡



- Corresponding signals ➡ **(p. 79)**
- If [H-freq.] or [V-freq.] is shown in red, the signals may not be supported.

PC menu setting

- To make settings ➡ **"How to Use Menu Functions" (p. 30)**

Menu	Item			Adjustments / Configurations (alternatives)
Picture	Advanced Settings	White Balance	**R-Gain, G-Gain, B-Gain**	Adjusts the white balance of bright red / green / blue area
			R-Cutoff, G-Cutoff, B-Cutoff	Adjusts the white balance of dark red / green / blue area
			Reset White Balance	Press the OK button to reset to the default White Balance
		Gamma	**Gamma**	Switches the gamma curve **[S Curve] / [1.8] / [2.0] / [2.2] / [2.4] / [2.6]** ● Please note the numerical values are reference for the adjustment.
			Reset Gamma	Press the OK button to reset to the default Gamma
Setup	PC Setup		**Input Resolution**	Switches to a wide view: VGA (640 × 480 pixels) / WVGA (852 × 480 pixels) / XGA (1,024 × 768 pixels) / WXGA (1,280 × 768 pixels, 1,366 × 768 pixels) ● Options change depending on signals
			Clock	Set to the minimum level if noise occurs
			H-pos	Adjusts horizontal position
			V-pos	Adjusts vertical position
			Clock Phase	Eliminates flicker and distortion ● Adjust after Clock adjustment ● Set to the minimum level if noise occurs
			Sync	PC sync signal type **[H & V] / [SOG]** **[H & V]:** by the horizontal and vertical signals from your PC **[SOG]:** Sync on Green sync from your PC
			Reset PC Settings	Press the OK button to reset [PC Setup] to the default settings
	DVI Position Settings		**H-pos**	Adjusts horizontal position settings of DVI
			V-pos	Adjusts vertical position settings of DVI
			Reset DVI Position Settings	Press the OK button to reset [DVI Position Settings] to the default settings

- Other items ➡ **(p. 31 - 36)**

Note

- For HDMI-compatible PC, possible to connect to HDMI terminals (HDMI1 / HDMI2) by using HDMI cable (p. 77).

Using Media Player

Media Player allows you to enjoy photo, video or music recorded on an SD Card and a USB Flash Memory.
VIERA IMAGE VIEWER is the function of the easy viewing for photos or videos recorded on an SD Card on the TV screen by simply inserting into the SD Card slot.

Photo mode:
Still pictures recorded by digital cameras will be displayed.

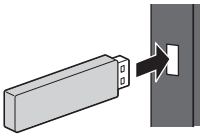
Video mode:
Moving pictures recorded by digital video cameras and digital video data will be played back.

Music mode:
Digital music data will be played back.

- During the operation, audio signal is output from AUDIO OUT, DIGITAL AUDIO OUT and HDMI2 (ARC function) terminals. To use HDMI2 with ARC function, connect an amplifier that has ARC function (p. 62) and set to use theatre speakers (p. 67).
- [Date] shows the date on which the recording was made by the recording equipment. The file without record of the date is shown "**/**/****".
- The picture may not appear correctly on this TV depending on the recording equipment used.
- Display may take some time when there are many files and folders.
- Partly degraded files might be displayed at a reduced resolution.
- Picture setting may not work depending on the conditions.
- The folder and file names may be different depending on the digital camera or digital video camera used.

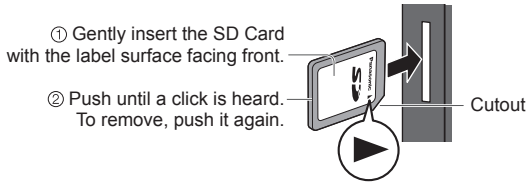
■ To insert or remove the SD Card / USB Flash Memory

USB Flash Memory



- Ensure alignment is straight and complete when inserting or removing.
- Connect the USB Flash Memory to the USB port.
- Check the type of terminals and devices are correct when connecting.

SD Card


① Gently insert the SD Card with the label surface facing front.
② Push until a click is heard. To remove, push it again.
Cutout

- For the information of the devices ➡ **"Devices for playing back" (p. 76)**
- For the supported file format ➡ **"Supported file format in Media Player and media servers" (p. 74, 75)**

1 Insert the SD Card or USB Flash Memory to the TV

➡ **(p. 45)**

- When the SD Card is inserted, switching to Media Player will be done automatically.

2 Start Media Player

SD CARD

- You can also start by pressing following button.

AV ➡ **"Watching External Inputs" (p. 28)**

3 Select the device to access

Selected device name

① select
② access

- If only one device connected, this step will be skipped.

4 Select the content

① select
② access

[Photo] ➡ **(p. 47)**
[Video] ➡ **(p. 50)**
[Music] ➡ **(p. 52)**

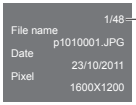
5 Enjoy Media Player

Example: Thumbnail - [All photos]

Selected device name

- To display the information of the highlighted content

INFO



File number / Total file number

Note

- You can also access each mode directly by using VIERA TOOLS. ➡ **(p. 29)**
- Select the appropriate device and content for playing back each file.

Change the device

You can change to the other device directly in the same mode if two devices are connected.

1 While the thumbnail is displayed, display the device selection

Y

2 Select the device to access

Selected device name

① select
② access

Change the contents

You can switch to the other mode of Media Player from the thumbnail view.
- The mode can be switched in the current device.

1 While the thumbnail is displayed, display the contents selection

B

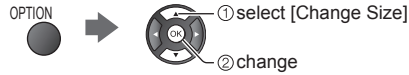
2 Select the contents

Photo mode

Photo mode will read all ".jpg" extension files in the SD Card or USB Flash Memory.

The thumbnail of all the photos in the SD Card or USB Flash Memory will be displayed.
Example: Thumbnail - [All photos]

- To change the size of photos on a thumbnail screen



: Error display

[Single view] - Photos are displayed one at a time.
Select the file from the thumbnail of photos to be viewed

Example:

Operation guide

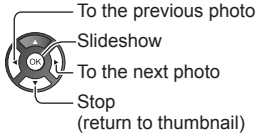
- To display / hide the operation guide

INFO

- To return to thumbnail

RETURN

- To operate Single view



- To rotate 90°

B

[Slideshow] - Slideshow completes when all photos are viewed within the current thumbnail.

1 Select the file from the thumbnail of photos for the first view

2 Start Slideshow

R

- To display / hide the operation guide

INFO

- To pause (return to Single view)
- To return to thumbnail

RETURN

- To change the back ground music ➡**"Photo Settings" (p. 48)**

■ To sort by folder, recorded date or recorded month

1 Display the view selection in the thumbnail view

G

2 Select the sort type

[Folder view]:
Displays the thumbnail grouped by folder.
- The files which are not into a folder will be collected to the folder named "/".

[Sort by Date] / [Sort by Month]:
Displays the thumbnail grouped by the same date or month.
- The group of the photos without a recorded date is shown as [Unknown].

- To return to the thumbnail of all photos

G

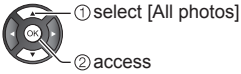


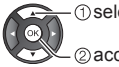
Photo Settings

Setup the settings for Photo mode.

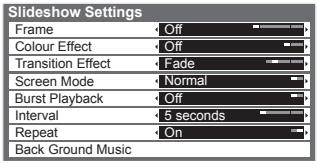
1 Display the option menu

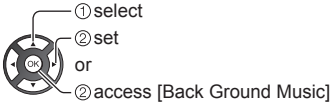
OPTION

2 Select [Slideshow Settings]



3 Select the items and set

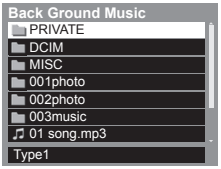
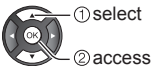
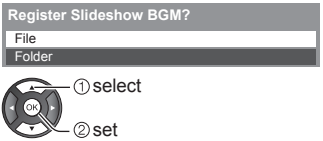




Note

- Picture quality may become lower depending on the slideshow settings.
- Picture setting may not work depending on the slideshow settings.

Menu	Item	Adjustments / Configurations (alternatives)
Slideshow Settings	**Frame**	Selects the frame type of the slideshow **[Off] / [Multi] / [Collage] / [Drift (+ calendar)] / [Drift] / [Gallery (+ calendar)] / [Gallery] / [Cinema]** **[Multi]:** 9 photos are displayed orderly at once. **[Collage]:** Each photo is displayed at a random position and random scale. **[Drift (+ calendar)] / [Drift]:** Photos are displayed like flow images. ● You can select to display the calendar or not. The month of calendar is turned by pressing the left or right cursor button. **[Gallery (+ calendar)] / [Gallery]:** The various sizes of photos in the frame are displayed. ● You can select to display the calendar or not. The month of calendar is turned by pressing the left or right cursor button. **[Cinema]:** Photos are displayed like old films (sepia tone).
	Colour Effect	Selects the colour effect of photos on Single view and Slideshow **[Off] / [Sepia] / [Gray scale]** ● This function is not available when [Frame] is set to [Drift], [Gallery] or [Cinema].

Menu	Item	Adjustments / Configurations (alternatives)
Slideshow Settings	**Transition Effect**	Selects the transition effect for switching the photo during the slideshow **[Off] / [Fade] / [Slide] / [Dissolve] / [Motion] / [Random]** **[Fade]:** The next photo fades in gradually. **[Slide]:** The next photo slides and appears from the left side. **[Dissolve]:** Each photo is dissolved when switching to the next photo. **[Motion]:** Each photo is displayed with an effect of enlarging, reducing, moving up or moving down. **[Random]:** Each transition is selected at random. ● This function is available when [Frame] is set to [Off].
	Screen Mode	Selects enlarged or normal viewing on Single view and Slideshow **[Normal] / [Zoom]** ● This function is not available when [Frame] is set to [Collage], [Drift], [Gallery] or [Cinema] or when [Transition Effect] is set to [Motion]. ● Depending on the photo size, it may not be fully enlarged to fill the screen, e.g. portrait style picture.
	Burst Playback	Selects whether to display burst photos in a fast-paced slideshow mode **[Off] / [On]** ● This function is not available when [Frame] is set to [Drift], [Gallery] or [Cinema] or when [Transition Effect] is set to [Motion].
	Interval	Selects slideshow interval **[5] / [10] / [15] / [30] / [60] / [90] / [120] (seconds)** ● This function is not available when [Frame] is set to [Drift], [Gallery] or [Cinema] or when [Transition Effect] is set to [Motion].
	Repeat	Slideshow repeat **[Off] / [On]**
	Back Ground Music	Selects the back ground music during Photo mode **[Off] / [Type1] / [Type2] / [Type3] / [User] / [Auto]** ● [Type1], [Type2] and [Type3] are fixed music installed on this TV. **[User]:** Music data in the device registered by yourself will be played back. **To register the music** 1. Select the music file Depending on the condition of the device, select folders until you reach the desired music file.   2. Select [File] or [Folder]  [File]: The selected music file will be registered. [Folder]: All the music in the folder which contains the selected music file will be registered. ● If no music has been registered or the device which has the registered music is removed, no sound will be produced. **[Auto]:** Music data stored in the root folder of the current device will be played back randomly. ● If there is no available music data, no sound will be produced.

Video mode

- Supported file format ➡ **(p. 74)**

The thumbnail of video titles in the SD Card or USB Flash Memory will be displayed.

Example: Thumbnail - [Title view]

The preview will start when the title / scene is highlighted if it supports a preview.

- To turn off the preview
  ➡ **"Video Setup" (p. 51)**

: Error display

: The file does not support thumbnail view.

Select the title → Start playback

■ Playback from the selected scene in the title (SD-Video or AVCHD)

Playback of the selected scene will start to the end of the title.

1 Select the title

2 Select the scene

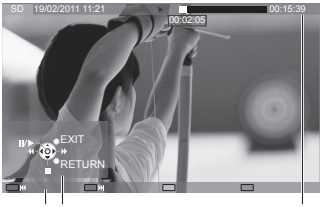
3 Start playback

Note

- The structure of titles and scenes may vary depending on the digital video camera used.
- To repeat playback ➡ **"Video Setup" (p. 51)**

■ How to operate in the playback

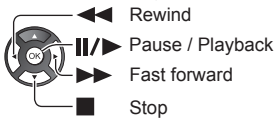
Example: Playback



- To display / hide the operation guide and information banner

INFO

- To operate the playback



- To change aspect

ASPECT

- To the previous title / scene

R

- To the next title / scene

G

- To return to thumbnail

RETURN

■ Video Setup

Setup the settings for Video mode.

- Menu items and selectable options vary depending on the content.

1 Display the option menu

OPTION

2 Select [Video Setup]

3 Select the items and set

Menu	Item	Adjustments / Configurations (alternatives)
Video Setup	**Video Preview**	Sets to start the preview of the title or scene in the thumbnail view **[Off] / [On]** ● Image may not be displayed for an instant in the thumbnail view. Set the preview [Off] to resolve this. ● Only available in the thumbnail view
	Audio Selection	Selects between selectable sound tracks (if available) ● It may take several seconds to change the sound. ● Only available during playback
	Subtitle	Subtitles On / Off (if available) ● Only available during playback
	Subtitle Text	Selects the font type to display subtitles correctly (if available) ● Only available during playback
	Aspect Change	**[Aspect1]:** Displays the content enlarged without distortion. **[Aspect2]:** Displays the content full-screen. **[Original]:** Displays the content original size. ● You can also change the aspect using the ASPECT button. ● Aspect change may not work depending on the content. ● Only available during playback
	Repeat	Playback repeat within the title or selected file (depending on the content) **[Off] / [On]**

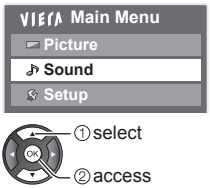
Audio output Settings

You can enjoy the multi-channel sound via an amplifier connected to DIGITAL AUDIO OUT or HDMI2 (ARC function) terminal.

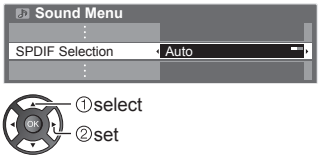
- To confirm or change the current sound status (see above)

1 Display the menu and Select [Sound]

MENU



2 Select [SPDIF Selection] and set

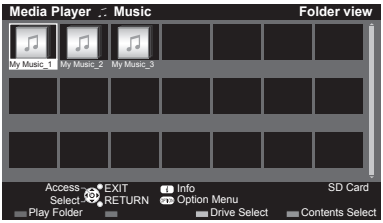


Menu	Item	Adjustments / Configurations (alternatives)
Sound	**SPDIF Selection**	SPDIF: A standard audio transfer file format Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT and HDMI2 (ARC function) terminals **[Auto] / [PCM]** **[Auto]:** Dolby Digital is output as Dolby Digital Bitstream. MPEG is output as PCM. **[PCM]:** Digital output signal is fixed to PCM.

Music mode

● Supported file format ➡**(p. 75)**

The thumbnail of music folders in the SD Card or USB Flash Memory will be displayed.
Example: Thumbnail - [Folder view]



● To play back the selected folder

Select the folder ➡ Start playback

■ Playback from File view

Selected file will be played back.

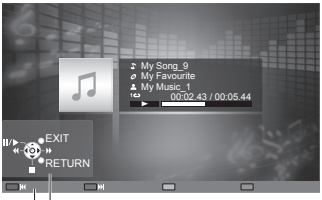
1 Select the folder

2 Select the file

3 Start playback

■ How to operate in the playback

Example: Playback

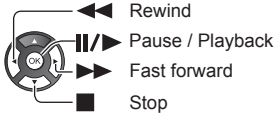


Operation guide

● To display / hide the operation guide

INFO

● To operate the playback



● To the previous track

● To the next track

● To return to thumbnail

Music Setup

Setup the setting for Music mode (only available in the thumbnail view).

1 Display the option menu

2 Select [Music Setup]

3 Set

[Folder]: Playback repeat within the selected folder

[One]: Playback repeat of the selected one file

Using Network Services (DLNA)

DLNA®

This TV is a DLNA Certified™ product.
DLNA (Digital Living Network Alliance) is a standard that makes DLNA Certified digital electronics easier and more convenient to use on a home network. To learn more, visit www.dlna.org.
It allows you to share photos, videos and music stored in the DLNA Certified media server (for example, PC with Windows 7 installed, etc.) connected to your home network, and enjoy the contents on the TV screen.

- For the supported file format ➡ **(p. 74, 75)**
- AVCHD and DivX files are not supported by DLNA functions of this TV, but can be played by Media Player (p. 45).

■ Media server

Store photos, videos or music into the DLNA Certified media server, and then you can enjoy them on the TV.
To use a PC as a media server
Prepare the PC with Windows 7 or ensure the server software is installed on the PC.
“Windows 7” and “TwonkyMedia server 6 (installed on the PC with Windows 7, Windows Vista or Windows XP)” are the server software that has been tested for compatibility with this TV (as of January, 2011). Any other server software have not been tested with this TV, therefore compatibility and performance cannot be assured.

- Windows 7
  The setup for homegroup settings of Windows 7 is required. For details, refer to the help functions of Windows 7.
- TwonkyMedia server
  “TwonkyMedia server” is the product of PacketVideo Corporation.
  To obtain the Installation Guides for installing and setting “TwonkyMedia server”, visit the website of TwonkyMedia. Additional fees may be charged to obtain server software.

Note

- The DLNA control function of Windows 7 is not supported with this TV.
- For more information about the server software, please consult each software company.
- When server software for the media server is installed on the PC, the data may be at risk of being accessed by other people. Please take care of the settings and connections under the network circumstances at the office, hotel or even at home when not using a router.

Network connections ➡ “Example 1”, “Example 2” (p. 54)

Network setup ➡ (p. 54 - 56)

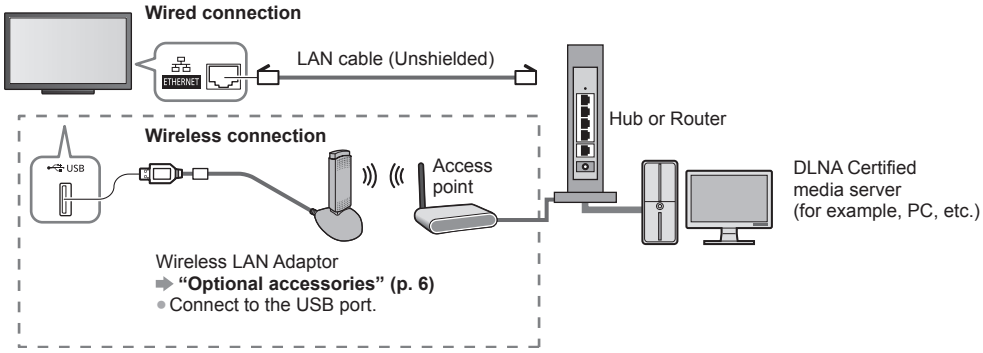
DLNA operations ➡ (p. 57 - 60)

Network connections

To use only DLNA features, you can operate the features without broadband network environment.

- Set up and connect any equipment required for the network environment. You cannot make settings for the equipment on this TV. Read the manual of the equipment.
- Required speed (effective): at least 1.5 Mbps for SD and 6 Mbps for HD picture quality, respectively. If the transfer speed is not enough, contents may not be played back properly.

Example 1



- Ensure to use a LAN straight cable for this connection.
- Ensure that the broadband routers and hubs are compatible with 10BASE-T / 100BASE-TX.
- If you use the equipment compatible only with 100BASE-TX, category 5 LAN cables are required.

Example 2

You can connect the TV and the equipment directly to use DLNA features.

- Ensure to use a LAN cross cable for this connection.

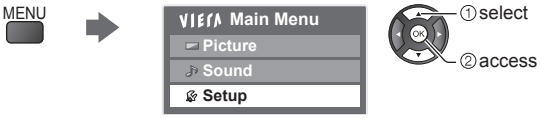
Note

- You cannot make settings for the network equipment on this TV. You may be required to make settings on your computer.

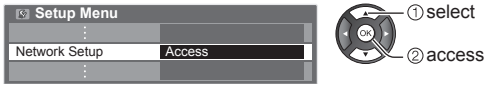
Network Setup

- Ensure the connections are completed before starting Network Setup.
  ➡ **"Network connections" (see above)**

1 Display the menu and select [Setup]



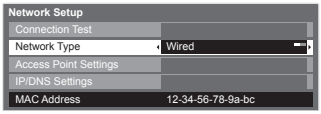
2 Select [Network Setup]



Wired connection settings

This setting is for the network connection by using the LAN cable.

1 Select [Network Type] and set to [Wired]

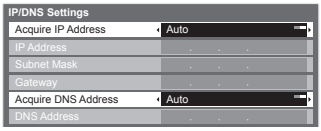


If you make the network connection like “Example 2” (p. 54), you do not have to set [Acquire DNS Address].

2 Select [IP/DNS Settings] and set the items

■ [Acquire IP Address] / [Acquire DNS Address]

Sets [IP Address], [Subnet Mask], [Gateway], and [DNS Address].
Select [Acquire IP Address] / [Acquire DNS Address] and set to [Auto] (recommended).

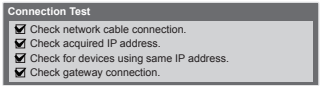


- The available settings are displayed automatically.

Manual settings ([IP Address], [Subnet Mask], [Gateway], [DNS Address])

3 Select [Connection Test] and access to test

- Performs automatic testing of the network connection for the TV. (It takes a while to test.)


Connection Test
Check network cable connection.
Check acquired IP address.
Check for devices using same IP address.
Check gateway connection.

☑ : succeeded

The test is successful and the TV is connected to the network.

☒ : failed

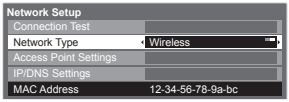
Check the settings and connections. And then try again.

Wireless connection settings

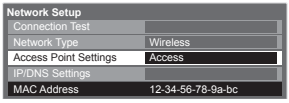
This setting is for the wireless network connection.

- Confirm the encryption key, settings and positions of your access point before starting setup. For details, read the manual of the access point.

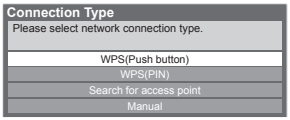
1 Select [Network Type] and set to [Wireless]



2 Select [Access Point Settings]



3 Select the connection type and set

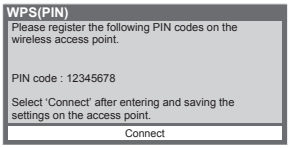


■ [WPS(Push button)]

➡ **“Auto Tuning” (p. 17)**

■ [WPS(PIN)]

Enter the PIN code to the access point, and then select [Connect]


WPS(PIN)
Please register the following PIN codes on the wireless access point.
PIN code : 12345678
Select ‘Connect’ after entering and saving the settings on the access point.
Connect

■ [Search for access point]

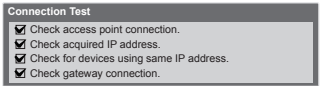
➡ **“Auto Tuning” (p. 17)**

■ [Manual]

You can setup SSID, authentication type, encryption type, and encryption key manually.
Follow the on-screen instructions and set manually.

4 Select [Connection Test] and access to test

- Performs automatic testing of the network connection for the TV. (It takes a while to test.)


Connection Test
Check access point connection.
Check acquired IP address.
Check for devices using same IP address.
Check gateway connection.

☑ **: succeeded**

The test is successful and the TV is connected to the network.

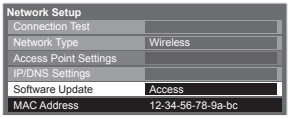
☒ **: failed**

Check the settings and connections. And then try again.

Update TV’s software U50Z series / X50Z series

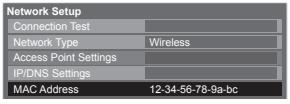
Accesses the specific website to update TV’s software and search if any software updates are available.

Select [Software Update]



- Follow the on-screen instructions.

Note



[MAC Address]

- MAC address is a unique address that identifies hardware in the network. (for information only)

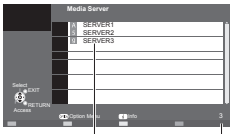
Using DLNA® features

- Ensure the preparation of the media server, network connections and network settings are completed.
  ➡ **(p. 53 - 56)**

1 Display [VIERA TOOLS] and select [Media Server]

2 Select one of the media servers to access

Example: Media server list



Available media servers

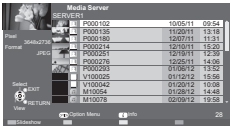
Total listed number

- To display the information of the highlighted media server

INFO

3 Select the file

Example: File list



- Depending on the condition of media server, you may need to select the folder before selecting the file.
- To display the information of the highlighted file

INFO

Note

- Non-playable files are also listed but cannot be selected.
- Turn the TV off, and then on again when changing or reconnecting the network connection.

For photo file

[Single view] - Photos are displayed one at a time.

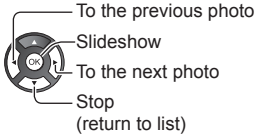
Example:

Operation guide

- To display / hide the operation guide

INFO

- To operate Single view



- To return to list

RETURN

- To rotate 90°

B

[Slideshow] - Slideshow completes when all photos are viewed within the list.

1 Select the photo file from the list for the first view **2 Start Slideshow**

- To display / hide the operation guide

INFO

- To pause (return to Single view)

- To return to list

RETURN

For video file

Playback - Playback will start.

Example: Playback

Operation guide

Information banner

- To display / hide the operation guide and information banner

INFO

- To the previous content

R

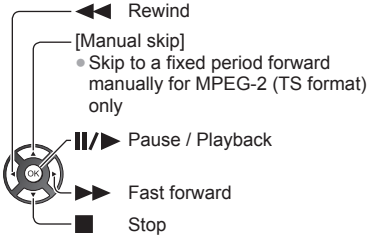
- To the next content

G

- To change aspect

ASPECT

- To operate the playback



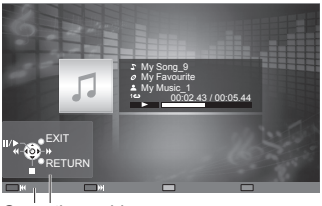
- To return to list

RETURN

For music file

Playback - Playback will start.

Example: Playback

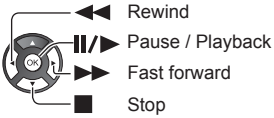


Operation guide

- To display / hide the operation guide

INFO

- To operate the playback



- To the previous track

R

- To the next track

G

- To return to list

RETURN

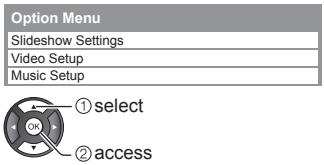
Option menu for each content

Setup the settings for Photo, Video and Music file operations.

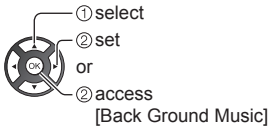
1 Display the option menu

OPTION

2 Select [Slideshow Settings], [Video Setup] or [Music Setup]



3 Select the items and set



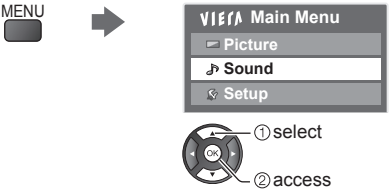
Menu	Item	Adjustments / Configurations (alternatives)
Slideshow Settings	**Transition Effect**	Selects the transition effect for switching the photo during the slideshow **[Off] / [Fade] / [Slide] / [Dissolve] / [Motion] / [Random]** **[Fade]:** The next photo fades in gradually. **[Slide]:** The next photo slides and appears from the left side. **[Dissolve]:** Each photo is dissolved when switching to the next photo. **[Motion]:** Each photo is displayed with an effect of enlarging, reducing, moving up or moving down. **[Random]:** Each transition is selected at random.
	Interval	Selects slideshow interval **[5] / [10] / [15] / [30] / [60] / [90] / [120] (seconds)** ● This function is not available when [Transition Effect] is set to [Motion].
	Repeat	Slideshow repeat **[Off] / [On]**
	Back Ground Music	Selects the back ground music during Photo mode **[Off] / [Type1] / [Type2] / [Type3]**
Video Setup	**Video Preview**	Sets to start the preview of the title or scene in the thumbnail screen **[Off] / [On]** ● Image may not be displayed for an instant in the thumbnail screen. Set the preview [Off] to resolve this.
	Audio Selection, Dual Audio,	Selects between selectable sound tracks (if available) ● It may take several seconds to change the sound. ● Only available during playback
	Subtitle Language U50Z series / X50Z series	Selects the language in which subtitles should appear (if available) ● Only available during playback
	Aspect Change	**[Aspect1]:** Displays the content enlarged without distortion. **[Aspect2]:** Displays the content full-screen. **[Original]:** Displays the content original size. ● You can also change the aspect using the ASPECT button. ● Aspect change may not work depending on the content. ● Only available during playback
	Repeat	Playback repeat within the selected file **[Off] / [On]**
Music Setup	**Repeat**	Playback repeat **[Off] / [Folder] / [One]** **[Folder]:** Playback repeat within the selected folder. **[One]:** Playback repeat of the selected one file.

Audio output settings (for video contents)

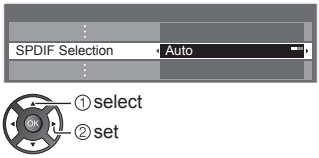
You can enjoy the multi-channel sound via an amplifier connected to DIGITAL AUDIO OUT or HDMI2 (ARC function) terminal.

- To confirm or change the current sound status ➡ **(p. 51)**

1 Display the menu and Select [Sound]



2 Select [SPDIF Selection] and set



Menu	Item	Adjustments / Configurations (alternatives)
Sound	**SPDIF Selection**	SPDIF: A standard audio transfer file format Selects the initial setting for digital audio output signal from DIGITAL AUDIO OUT and HDMI2 (ARC function) terminals **[Auto] / [PCM]** **[Auto]:** Dolby Digital is output as Dolby Digital Bitstream. MPEG is output as PCM. **[PCM]:** Digital output signal is fixed to PCM.

Link Functions (VIERA Link)

VIERA Link (HDAVI Control™) connects the TV and the equipment with VIERA Link function, and enables easy control, convenient recording, playback, energy saving, creating home theatre, etc., without complicated setting.

➡ **(p. 63 - 67)**

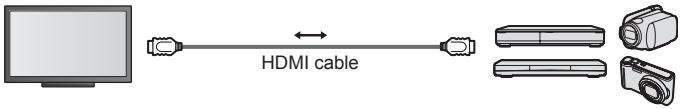
- This TV supports “HDAVI Control 5” function. But available features are depending on the connected equipment’s version of HDAVI Control. Please read the manual of the equipment to confirm the version.
- VIERA Link features may be available even with other manufacturers’ equipment supporting HDMI CEC.

Summary of features

VIERA Link (HDMI connection)

Features \ Connected equipment	DIGA Recorder	DVD Player / Blu-ray Disc Player	HD Video Camera / LUMIX Camera
Channel download	○*2	–	–
Easy playback	○	○	○
Power on link	○	○	○
Power off link	○	○	○
Reduce unnecessary power consumption in Standby	○*3	○*3	–
Auto standby for unnecessary equipment	○*3	○*3	–
Pause Live TV programme	○*2 *4	–	–
Direct TV Recording	○*2	–	–
Control the menu of the connected equipment by VIERA remote control	○*1	○*1	○*1
Speaker control	–	–	–

Connection



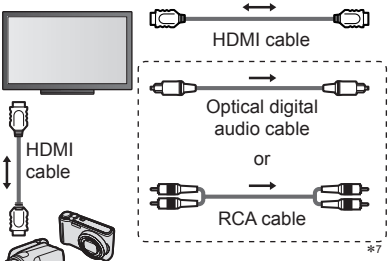
DIGA Recorder / DVD Player / Blu-ray Disc Player / HD Video Camera / LUMIX Camera with VIERA Link function

- Use fully wired HDMI compliant cable.
- Connect the equipment supporting VIERA Link to the TV’s HDMI terminal via an HDMI cable.
- About HDMI cable for connecting Panasonic HD Video Camera or LUMIX Camera, read the manual of the equipment.

VIERA Link (HDMI and Audio out connections)

Features \ Connected equipment	Player theatre	Blu-ray Disc theatre	Amplifier
Channel download	–	–	–
Easy playback	○*5	○*5	–
Power on link	○	○	–
Power off link	○	○	○
Reduce unnecessary power consumption in Standby	–	○*3	–
Auto standby for unnecessary equipment	○*3 *6	○*3 *6	○*3
Pause Live TV programme	–	–	–
Direct TV Recording	–	–	–
Control the menu of the connected equipment by VIERA remote control	○*1	○*1	–
Speaker control	○	○	○

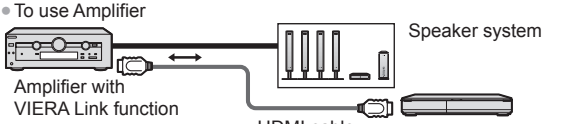
Connection



HD Video Camera / LUMIX Camera with VIERA Link function

● To use Player theatre / Blu-ray Disc theatre

● To use Amplifier



- Use fully wired HDMI compliant cable.
- Connect the equipment supporting VIERA Link to the TV's HDMI terminal via an HDMI cable.
- Use the optical digital audio cable, or RCA cable for audio output from the TV.

*1: Available with the equipment which has "HDAVI Control 2 or later" function.
*2: Available with the equipment which has "HDAVI Control 3 or later" function.
*3: Available with the equipment which has "HDAVI Control 4 or later" function.
*4: Available with a DIGA Recorder which has HDD.
*5: While playing a disc.
*6: Except for watching a disc.
*7: If the connected equipment has "HDAVI Control 5" function, you do not have to use this audio cable (Optical digital audio cable or RCA cable). In this case, connect the equipment to the TV's HDMI2 terminal via an HDMI cable.

VIERA Link Control of compatible equipment ➡[VIERA Link Control] (p. 65)

- Table below displays maximum number of compatible equipment that can be controlled by VIERA Link Control. This includes connections to equipment already connected to the TV.
  For example, DIGA Recorder connected to Amplifier which is connected to the TV via an HDMI cable.

Type of the equipment	Maximum number
Recorder (DIGA Recorder, etc.)	3
Player (DVD Player, Blu-ray Disc Player, HD Video Camera, LUMIX Camera, Digital Camera, Player theatre, Blu-ray Disc theatre, etc.)	3
Audio system (Player theatre, Blu-ray Disc theatre, Amplifier, etc.)	1
Tuner (Set top box, etc.)	4

VIERA Link "HDAVI Control™"*

***Enjoy additional HDMI Inter-Operability with Panasonic products which have "HDAVI Control" function.**

This TV supports "HDAVI Control 5" function.

These features are limited to models incorporating "HDAVI Control" and "VIERA Link".

- Some functions are not available depending on the equipment's version of HDAVI Control. Confirm the connected equipment's version of HDAVI Control.
- VIERA Link "HDAVI Control", based on the control functions provided by HDMI which is an industry standard known as HDMI CEC (Consumer Electronics Control), is a unique function that we have developed and added. As such, its operation with other manufacturers' equipment that supports HDMI CEC cannot be guaranteed.
- Please refer to individual manuals for other manufacturers' equipment supporting VIERA Link function.
- About applicable Panasonic equipment, consult your local Panasonic dealer.

Preparations

- Connect the equipment supporting VIERA Link.
- VIERA Link connection ➡ **(p. 61, 62)**
- Use fully wired HDMI compliant cable. Non-HDMI-compliant cables cannot be utilised.
  Recommended Panasonic's HDMI cable part number:
  • RP-CDHS15 (1.5 m) • RP-CDHS30 (3.0 m) • RP-CDHS50 (5.0 m)
- Set up the connected equipment. Read the manual of the equipment.
- For optimal recording, the settings of the recorder may need to be changed. For details, read the manual of the recorder.
- Set [VIERA Link] to [On] in the Setup Menu. ➡ **[VIERA Link] (p. 36)**
- Set up the TV.
  After connection, turn the equipment on and then switch the TV on.
  Select the input mode from HDMI1 or HDMI2 (p. 28), and make sure that an image is displayed correctly.
  This setup should be done each time when the following conditions occur:
  • for the first time
  • when adding or reconnecting equipment
  • when changing setup

Features available

Channel download

Channel settings can be downloaded to the recorder.

Easy playback

Automatic input switching - When the connected equipment is operated, input mode is switched automatically.

Power on link

Set Power on Link [On] in the Setup Menu to use this function ➡ [Power on Link] (p. 36)
When the connected equipment starts playback or direct navigator / function menu for the equipment are activated, the TV is automatically turned on. (Only when the TV is in Standby mode.)

Power off link

Set Power off Link [On] in the Setup Menu to use this function ➡ [Power off Link] (p. 36)
When the TV is set to Standby mode, the connected equipment is also automatically set to Standby.

- This function will work even if the TV enters Standby mode automatically by auto power standby function.

Reduce unnecessary power consumption in Standby [Standby Power Save]

Set Standby Power Save [On] in the Setup Menu to use this function ➡ [Standby Power Save] (p. 36)
The power consumption in Standby mode of the connected equipment is controlled higher or lower in synchronisation with the TV On / Off state to reduce the consumption.
When the TV is set to Standby mode, the connected equipment is automatically set to Standby and the power consumption of the connected equipment is automatically minimised.
When the TV is turned on, the connected equipment is still in Standby mode, but the power consumption is increased to make startup time fast.

- This function is effective if the connected equipment can change the power consumption in Standby mode and is set to higher consumption.
- This function works when [Power off Link] is set to [On].

Auto standby for unnecessary equipment [Intelligent Auto Standby]

Set Intelligent Auto Standby [On (With reminder)] or [On (No reminder)] in the Setup Menu to use this function ➡ [Intelligent Auto Standby] (p. 36)
When the TV is on, non-watched or non-used connected equipment goes into Standby mode automatically to reduce the power consumption. For example, when the input mode is switched from HDMI or when Speaker Selection is changed to [TV] (except for watching a disc).

- If you select [On (With reminder)], the on-screen message will be displayed before the connected equipment turns to standby.
- This function may not work properly depending on the connected equipment. If required, set to [Off].

Direct TV Recording - What you see is What you record [Direct TV Rec]

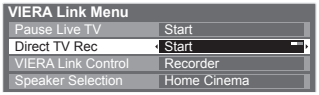
Records the current programme in the DIGA Recorder immediately.

- If you connect a variety of recorders including other manufacturers' recorders at the same time, connect the DIGA Recorder to the TV's lower HDMI terminal number. For example, if you use HDMI1 and HDMI2 for two recorders, connect the DIGA Recorder to HDMI1.
- If you cannot operate, check the settings and the equipment.
  ➡ **"Summary of features" (p. 61, 62), "Preparations" (p. 63)**

1 Display [VIERA Link Menu]

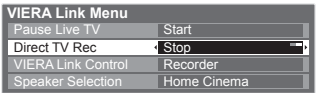
- You can also access directly by using VIERA TOOLS ➡ **"How to Use VIERA TOOLS" (p. 29)**

2 Select [Direct TV Rec] and start recording



■ To stop recording

Select [Stop] in [Direct TV Rec]



Pause Live TV programme [Pause Live TV]

You can pause the current TV programme and resume later.
The current TV programme will be recorded on HDD of the connected DIGA Recorder.

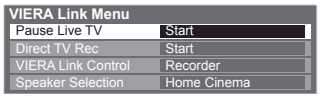
- This function is available with a DIGA Recorder which has HDD.
- If you connect a variety of recorders including other manufacturers' recorders at the same time, connect the DIGA Recorder which has an HDD to the TV's lower HDMI terminal number. For example, if you use HDMI1 and HDMI2 for two recorders, connect the DIGA Recorder which has HDD to HDMI1.
- If you cannot operate, check the settings and the equipment.
  ➡ **"Summary of features" (p. 61, 62), "Preparations" (p. 63)**

1 Display [VIERA Link Menu]

- You can also access directly by using VIERA TOOLS ➡ **"How to Use VIERA TOOLS" (p. 29)**

2 Select [Pause Live TV] and pause

The TV picture will be paused.



- The current TV programme is recorded on HDD from where it was paused.
- If the paused TV picture disappears after a few minutes, press OPTION button to restore the pause picture.
- Follow the operation guide to operate [Pause Live TV] function.

■ To operate [Pause Live TV]

- If you stop playback, the recorded programme will be deleted from HDD.
- Operations may vary depending on the recorder. In this case, follow the operation guide or read the manual of the recorder.

■ To return to current TV (Stop playback of [Pause Live TV] / cancel pause)

Select [Yes]

- If you stop playback or cancel pause, the recorded programme will be deleted from HDD.

Control the menu of the connected equipment by VIERA remote control [VIERA Link Control]

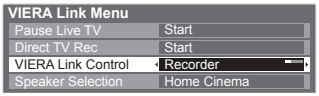
You can control some functions of the connected equipment with this TV remote control pointing at the TV's signal receiver.

- If you cannot operate, check the settings and the equipment.
  ➡ **"Summary of features" (p. 61, 62), "Preparations" (p. 63)**
- For details of the operations for the connected equipment, read the manual of the equipment.

1 Display [VIERA Link Menu]

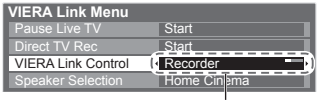
- You can also access directly by using VIERA TOOLS ➡ **"How to Use VIERA TOOLS" (p. 29)**

2 Select [VIERA Link Control]



3 Select the equipment to access

Select the type of the connected equipment and access.



[Recorder] / [Player] / [Home Cinema] / [Video Camera] / [LUMIX] / [Digital Camera] / [Other]

- The displayed item may vary depending on the connected equipment.
- [Home Cinema] means Player theatre, Blu-ray Disc theatre or Recorder theatre.
- [Other] means Tuner set top box.

The menu of the accessed equipment will be displayed.
(Input mode will be changed automatically)

4 Operate the menu of the equipment

Follow the operation guide

- To display the operation guide

OPTION

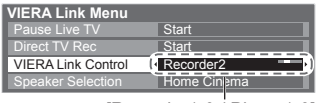
If other manufacturers' equipment is accessed, Setup / Contents Selection menu may be displayed.

- Available VIERA remote control buttons depend on the connected equipment.

Note

- Some operations may not be available depending on the equipment. In this case use its own remote control to operate the equipment.

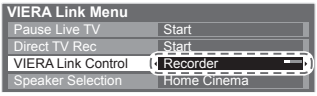
■ If multiple recorders or players are connected



[Recorder1-3 / Player1-3]

The number is given from the TV's lower number of HDMI terminal connected to the same type equipment. For example, two recorders to HDMI1 and HDMI2, the recorder connected to HDMI1 is displayed as [Recorder1], and the recorder connected to HDMI2 is displayed as [Recorder2].

■ If you access non-VIERA Link equipment



The type of the connected equipment is displayed.
Although you can access the connected equipment, you cannot operate it.
Use its own remote control to operate the equipment.

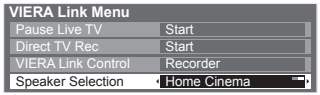
Speaker control [Speaker Selection]

You can control the theatre speaker with this TV remote control pointing at the TV's signal receiver.
- If you cannot operate, check the settings and the equipment.
  ➡ **"Summary of features" (p. 61, 62), "Preparations" (p. 63)**

1 Display [VIERA Link Menu]

- You can also access directly by using VIERA TOOLS ➡ **"How to Use VIERA TOOLS" (p. 29)**

2 Select [Speaker Selection]



select

3 Set to [Home Cinema] or [TV]

set

[Home Cinema]:
The sound is from theatre speakers. Player theatre, Blu-ray Disc theatre or Amplifier will be automatically turned on if it is in Standby mode.

- Volume up / down

- Mute

- The sound of TV speakers is mute.
- When the equipment is turned off, TV speakers will be active.

[TV]:
TV speakers are active.

Multi-channel sound

If you want to enjoy the multi-channel sound (e.g. Dolby Digital 5.1ch) via an Amplifier, connect it with HDMI cable and Optical digital audio cable (p. 62), and then select [Home Cinema]. If your Amplifier has "HDAVI Control 5" function, you only need to connect it with HDMI cable to the TV's HDMI2 terminal.
To enjoy the sound from the DIGA Recorder in multi-channel sound, connect an HDMI cable from the DIGA Recorder to the Amplifier (p. 62).

Note

- These functions may not work properly depending on the connected equipment.
- Image or sound may not be available for the first few seconds when input mode is switched.
- "HDAVI Control 5" is the newest standard (as of November, 2011) for HDAVI Control compatible equipment. This standard is compatible with conventional HDAVI equipment.
- To confirm this TV's version of HDAVI Control ➡ **[System Information] (p. 36)**

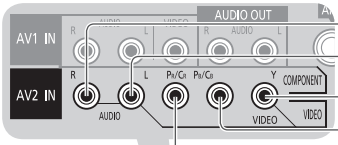
External Equipment

U50 series

These diagrams show our recommendations for connection of your TV to various pieces of equipment.
For other connections, consult the instructions for each piece of equipment, the basic connection (p. 12 - 15), the table (p. 72), and the specifications (p. 84, 85).

- Check the type of terminals and cable plugs are correct when connecting.

To watch DVDs

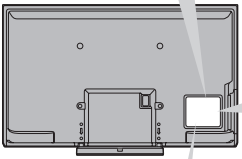


(Listening)

(Viewing)

DVD Player

Rear of the TV



HDMI equipment

Recorder / Player

Fully wired HDMI compliant cable

Camcorder

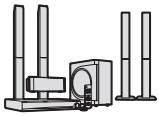
- HDMI connection ➡ **(p. 77)**

To listen with speakers

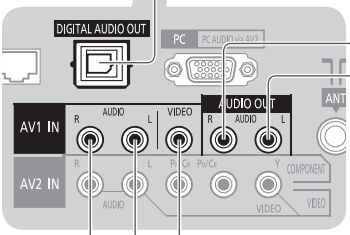
Optical digital audio cable

or

RCA cable



Amplifier with speaker system



To enjoy the sound from the external equipment in multi-channel sound (e.g. Dolby Digital 5.1ch), connect the equipment to the amplifier.
For the connections, read the manuals of the equipment and amplifier.

Camcorder / Game equipment

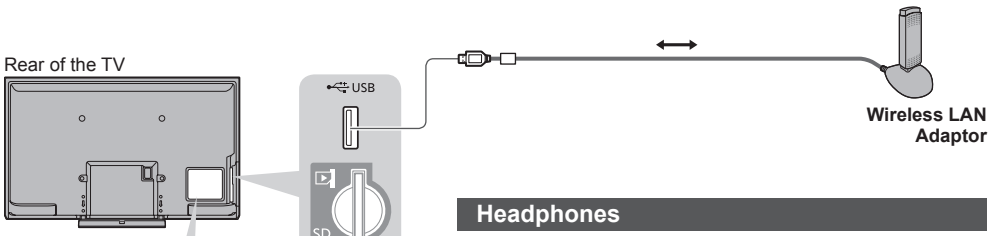
(Viewing)

Camcorder

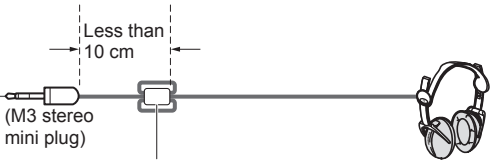
(Listening)

Game equipment

USB devices



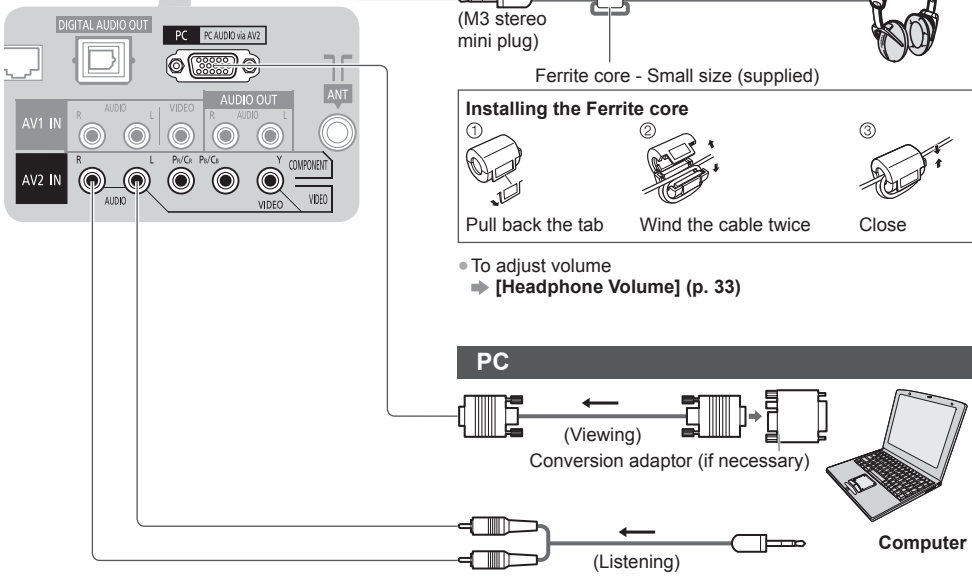
Headphones



Installing the Ferrite core

- To adjust volume
  ➡ **[Headphone Volume] (p. 33)**

PC

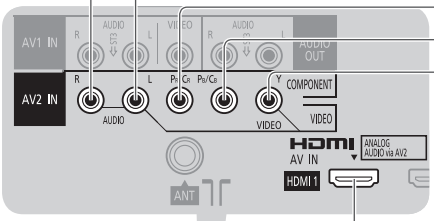


X50 series

These diagrams show our recommendations for connection of your TV to various pieces of equipment.
For other connections, consult the instructions for each piece of equipment, the basic connection (p. 12 - 15), the table (p. 72), and the specifications (p. 84, 85).

- Check the type of terminals and cable plugs are correct when connecting.

To watch DVDs



(Listening)

(Viewing)

DVD Player

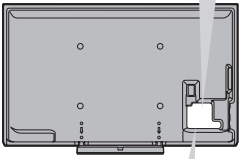
HDMI equipment

Recorder / Player

Fully wired HDMI compliant cable

Camcorder

Rear of the TV



- HDMI connection ➡ **(p. 77)**

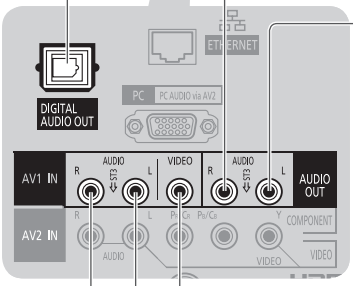
To listen with speakers

Optical digital audio cable

or

Amplifier with speaker system

RCA cable



To enjoy the sound from the external equipment in multi-channel sound (e.g. Dolby Digital 5.1ch), connect the equipment to the amplifier.
For the connections, read the manuals of the equipment and amplifier.

Camcorder / Game equipment

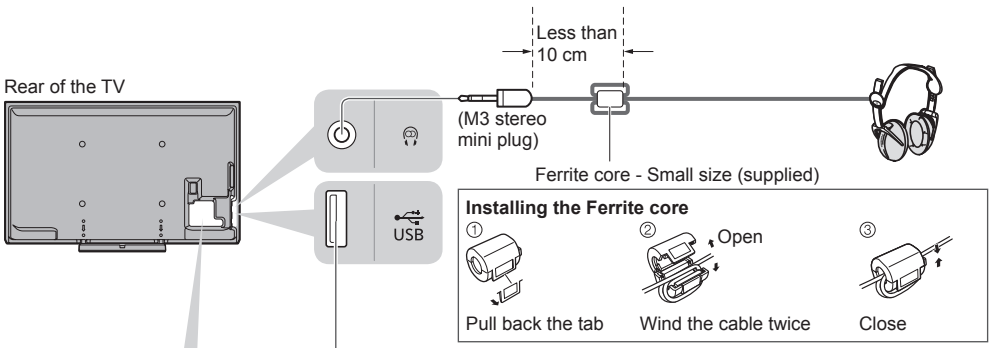
(Viewing)

Camcorder

(Listening)

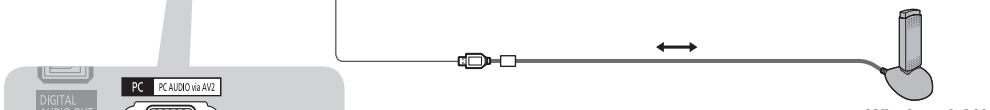
Game equipment

Headphones

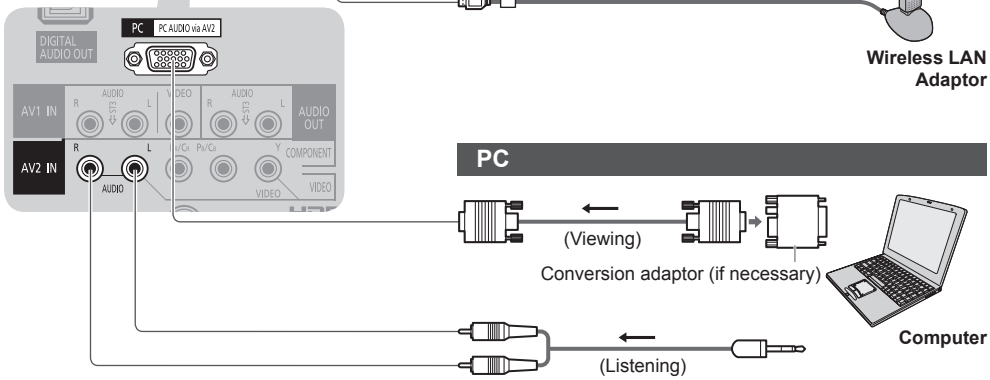


- To adjust volume
  ➡ **[Headphone Volume] (p. 33)**

USB devices



PC



Types of connectable equipment to each terminal

Features	Terminal							
	AV1 IN	AUDIO OUT	AV2 IN		DIGITAL AUDIO OUT	ETHERNET	HDMI 1 - 2	USB
			COMPONENT	VIDEO				
To watch satellite broadcasts (Set top box)	○		○				○	
To watch videocassettes / DVDs (VCR / DVD player)	○		○				○	
To watch camcorder images (Video camera)	○		○				○	
To play games (Game equipment)	○		○				○	
To use amplifier with speaker system		○			○		○*	
To use network functions for DLNA						○		○
VIERA Link							○	

○ : Recommended Connection

* : Use HDMI2 for connecting an amplifier. This connection is applicable when using an amplifier that has ARC (Audio Return Channel) function.

Technical Information

Channel Allocation (Analogue TV)

U50A series

CH Display / Receive Channel			
CH 0 - CH 5	S 2 - S 10	CH 5A	CH 6 - CH 9
CH 9A	CH 10 - CH 12	S 11 - S 44	CH 20 - CH 75

U50Z series / X50Z series

CH Display / Receive Channel			
CH 1 - CH 11	CH 21 - CH 70	CH 74 - CH 78	CH 80 - CH 120

Rating (Digital TV)

U50A series

Rating	Meaning	Rating	Meaning
- (No Block)	Not classified	M	Mature
P	Pre school	MA 15+	Mature Adult 15+
C	Children	AV 15+	Adult strong Violence 15+
G	General	R	Restricted 18+
PG	Parental Guidance recommended		

U50Z series / X50Z series

Rating	Meaning
- (No Block)	Not classified
G	General
PGR	Parental Guidance Recommended
AO	Adults Only

Stereo / Bilingual Sound Selection (Analogue TV)

When you receive the stereo / bilingual sound system, sound output modes can be selected by pressing the Sound Selection button.

Audio Signal	STEREO	MAIN I	SUB II	MONO
Mode Indicator	◯◯	I	II	▽

NICAM .....Used in New Zealand, Singapore, Hong Kong etc.

Type of broadcast	Regular broadcast (Standard Audio)	Regular + NICAM MONO I (MAIN I)	NICAM STEREO	NICAM DUAL MONO (MAIN I / SUB II)
Mode Indicator	No Indicator ⟷ ▽	I ⟷ ▽	◯◯ ⟷ ▽	I ⟷ II ▽

A2 (German) .....Used in Australia, Malaysia etc.

Type of broadcast	Regular broadcast (Standard Audio)	BILINGUAL or DUAL MONO: MAIN I / SUB II	STEREO
Mode Indicator	No Indicator ⟷ ▽	I ⟷ II	◯◯ ⟷ ▽

- If the stereo signal is poor or the receiving conditions are not optimum or if STEREO:MONO automatic switching occurs, it is recommended you switch from STEREO to MONO.
- Even when the contents of the receiving signal undergo changes, selection mode is kept intact.
- When the receiving conditions deteriorate, listening will be easier if the mode is set to the MONO position, using the Sound Selection button.
- DUAL, also known as DUAL MONO or as BILINGUAL is not currently transmitted in some countries.

Supported file format in Media Player and media servers

■ Photo

Format	File extension	Image resolution (pixel)	Details / Restrictions
JPEG	.jpg .jpeg	8 × 8 to 30,719 × 17,279	DCF and EXIF standards Sub-sampling: 4:4:4, 4:2:2, 4:2:0 ● Progressive JPEG is not supported.

■ Video

Container	File extension	Video codec	Audio codec	Details / Restrictions
AVCHD	.mts	H.264	Dolby Digital	AVCHD Standard Ver. 1.0 ● The data may not be available if a folder structure on the device is modified.
SD-Video	.mod	MPEG1 MPEG2	Dolby Digital MPEG Audio	SD-Video Standard Ver. 1.31 (Entertainment Video Profile) ● The data may not be available if a folder structure on the device is modified.
MOV	.mov	H.264 BP/MP/HP Motion JPEG	AAC Dolby Digital LPCM MP3	● This TV supports Motion JPEG recorded by Panasonic LUMIX Camera*1. ● This TV is not available for playing back Motion JPEG with the media server. *1: Some products of before the year 2004 may not be available. The compatibility with future products is not guaranteed.
MP4	.mp4	H.264 BP/MP/HP	AAC Dolby Digital MP3	● This TV supports this container recorded by Panasonic products. For details, read the manual of the products.
AVI	.avi .divx	DivX3 DivX4 DivX5 DivX6 MPEG4 SP/ASP	Dolby Digital MPEG Audio MP3	● Certified to play DivX HD video file in Media Player For details of DivX ➡ **(p. 75)**
ASF	.asf .wmv	VC-1 Windows Media Video Ver. 9	WMA	● Copy-protected files cannot be played back. ● WMA Pro and WMA Lossless are not supported.
MKV	.mkv	H.264 BP/MP/HP	AAC Dolby Digital MPEG Audio MP3	● Some subtitles or chapter functions may not be available.
TS	.ts	H.264 MPEG2	AAC Dolby Digital MPEG Audio	● This container can be played back only with the media server.

■ Music

Codec	File extension	Restrictions
MP3	.mp3	–
AAC	.m4a	● Copy-protected files cannot be played back.
WMA	.wma	● Copy-protected files cannot be played back. ● WMA Pro and WMA Lossless are not supported.

Note

- Some files may not be played back even if they fulfil these conditions.
- Do not use two-byte characters or other special codes for data.
- The device may become unusable with this TV if the file or folder names are changed.

DivX

DivX Certified® to play DivX® video up to 1080p HD including premium content.
ABOUT DIVX VIDEO:
DivX® is a digital video format created by DivX, LLC, a subsidiary of Rovi Corporation. This is an official DivX Certified® device that plays DivX video. Visit divx.com for more information and software tools to convert your files into DivX videos.

■ Subtitle text file of DivX

Subtitles format - MicroDVD, SubRip, TMPlayer

- The DivX video file and subtitles text file are inside the same folder, and the file names are the same except for the file extensions.
- If there are more than one subtitles text files inside the same folder, they are displayed in the following order of priority:
  ".srt", ".sub", ".txt".
- To confirm or change the current subtitle status while playing DivX content, press the OPTION button to display Option Menu.
- Depending on the methods used to create the file or the state of recording, only parts of the subtitles may be displayed, or the subtitles may not be displayed at all.

Note

- Depending on how you make SD Card, USB Flash Memory or the media server, files and folders may not be displayed in the order you numbered.
- Depending on how you create the files and the structure of folders, the files and folders may not be displayed.
- When there are many files and folders, operation may take time to complete or some files may not be displayed or playable.

ABOUT DIVX VIDEO-ON-DEMAND:
This DivX Certified® device must be registered in order to play purchased DivX Video-on-Demand (VOD) movies. To obtain your registration code, locate the DivX VOD section in the Setup Menu. Go to vod.divx.com for more information on how to complete your registration.

■ To show DivX VOD registration code

➡ **[DivX® VOD] (p. 36)**

- If you want to generate the new registration code, you have to deregister the current registration code.
  After playing DivX VOD content once, the confirmation screen to deregister will be displayed in [DivX® VOD] in the Setup Menu. If you press the OK button on the confirmation screen, the deregistration code will be generated and you will not be able to play any contents that you purchased using the current registration code.
  You will obtain the new registration code by pressing the OK button on the deregistration code screen.
- If you purchase DivX VOD content using a registration code different from this TV's code, you will not be able to play this content. ([Your device is not authorized to play this DivX protected video.] is displayed.)

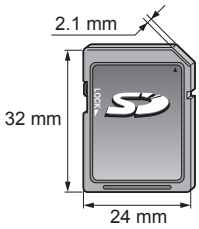
■ Regarding DivX content that can only be played a set number of times

Some DivX VOD content can only be played a set number of times.
When you play this content, the remaining number of plays is displayed. You cannot play this content when the number of remaining plays is zero. ([This DivX rental has expired.] is displayed.)

- When playing this content, the number of remaining plays is reduced by one in the following conditions:
  - If you exit the current application.
  - If you play the other content.
  - If you go to the next or previous content.

Devices for playing back

■ SD Card



Use an SD Card which meets SD standards. If not, it may cause the TV to malfunction.

Card format:
SDXC Card - exFAT
SDHC Card / SD Card - FAT16 or FAT32
Compliant card type (maximum capacity):
SDXC Card (64 GB), SDHC Card (32 GB), SD Card (2 GB), miniSD Card (2 GB) (requiring miniSD adaptor)

- If miniSD Card is used, insert / remove it together with the adaptor.
- Check the latest information on the card type at the following website.
  http://panasonic.jp/support/global/cs/tv/

■ USB Flash Memory

USB Flash Memory format: FAT16, FAT32 or exFAT

Note

- Data modified with a PC may not be displayed.
- Do not remove the device while the TV is accessing data. Otherwise this can damage device or TV.
- Do not touch the pins on the device.
- Do not subject the device to a high pressure or impact.
- Insert the device in the correct direction. Otherwise this can damage device or TV.
- Electrical interference, static electricity, or erroneous operation may damage the data or device.
- Back up the recorded data at regular intervals in case of deteriorated or damaged data or erratic operation of the TV. Panasonic is not liable for any deterioration or damage of recorded data.

HDMI connection

HDMI (high-definition multimedia interface) is the world's first complete digital consumer AV interface complying with a non-compression standard.
HDMI allows you to enjoy high-definition digital images and high-quality sound by connecting the TV and the equipment.
HDMI-compatible equipment*1 with an HDMI or DVI output terminal, such as a DVD player, a set top box or game equipment, can be connected to the HDMI terminal using an HDMI compliant (fully wired) cable.
For more information about connections ➡ **(p. 14, 68, 70)**

■ Applicable HDMI features

- Input audio signal:
  2ch Linear PCM (sampling frequencies - 48 kHz, 44.1 kHz, 32 kHz)
- Input video signal:
  ➡ **"Input signal that can be displayed" (p. 79)**
  Match the output setting of the digital equipment.
- Input PC signal:
  ➡ **"Input signal that can be displayed" (p. 79)**
  Match the output setting of the PC.
- VIERA Link (HDAVI Control 5)
  ➡ **[VIERA Link] (p. 63)**
- Content Type
- Audio Return Channel*2
  (HDMI2 terminal only)

■ DVI connection

If the external equipment has only a DVI output, connect to the HDMI terminal via a DVI to HDMI adaptor cable*3.
When the DVI to HDMI adaptor cable is used, connect the audio cable to AV2 IN audio terminals.
If the picture position is not fit to the screen during the DVI connection, adjust the position on [DVI Position Settings] in the Setup Menu (p. 44). The settings are memorised for each HDMI terminals and input signals.

Note

- Audio settings can be made on [HDMI1 / 2 Input] in the Sound Menu. (p. 34)
- If the connected equipment has an aspect adjustment function, set the aspect ratio to "16:9".
- These HDMI connectors are "type A".
- These HDMI connectors are compatible with HDCP (High-Bandwidth Digital Content Protection) copyright protection.
- Equipment having no digital output terminal may be connected to the input terminal of component or video to receive analogue signals.
- This TV incorporates HDMI™ technology.

*1: The HDMI logo is displayed on HDMI-compliant equipment.
*2: Audio Return Channel (ARC) is a function to send digital sound signals via an HDMI cable.
*3: Enquire at your local digital equipment retailer shop.

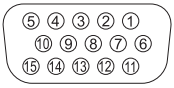
PC connection

A PC may be connected to this TV so that the PC screen is displayed and sound is heard from the TV.

- A PC adaptor is not necessary for the DOS/V-compliant D-sub 15-pin connector.
- Some PC models cannot be connected to this TV.
- When using PC, set the colour display quality of PC to the highest position.
- For details of the applicable PC signals ➡ **"Input signal that can be displayed" (p. 79)**
- Maximum display resolution

		U50 series	X50 series
Aspect	**4:3**	1,440 × 1,080 pixels	768 × 768 pixels
	16:9	1,920 × 1,080 pixels	1,024 × 768 pixels

- D-sub 15-pin connector signal



Pin No.	Signal Name	Pin No.	Signal Name	Pin No.	Signal Name
①	R	⑥	GND (Ground)	⑪	NC (not connected)
②	G	⑦	GND (Ground)	⑫	NC (not connected)
③	B	⑧	GND (Ground)	⑬	HD
④	NC (not connected)	⑨	NC (not connected)	⑭	VD
⑤	GND (Ground)	⑩	GND (Ground)	⑮	NC (not connected)

USB connection

- When using USB cables, use the supplied Ferrite core (Middle size) (p. 6) for each cable to comply with the EMC standard. As for installing the Ferrite core, refer to the installing of the Ferrite core for headphones. ➡ **(p. 69, 71)**
- It is recommended to connect the USB Flash Memory to the TV's USB ports directly.
- Some USB devices or USB HUB may not be used with this TV.
- You cannot connect any devices by using USB card reader.
- Additional information for USB devices may be on the following website.
  http://panasonic.jp/support/global/cs/tv/

Characters table for numeric buttons

You can enter characters by using numeric buttons for free input items.

Press the numeric button repeatedly until you reach the desired character.

- The character is set automatically if you leave for 1 second.
- You can also set the character by pressing the OK button or other numeric buttons within 1 second.
- The characters may vary depending on the input items.

Characters table:

Numeric buttons	Characters	Numeric buttons	Characters
1	. 1 ! : # + - * _ ( )	6	m n o 6 M N O
2	a b c 2 A B C	7	p q r s 7 P Q R S
3	d e f 3 D E F	8	t u v 8 T U V
4	g h i 4 G H I	9	w x y z 9 W X Y Z
5	j k l 5 J K L	0	Space 0

Input signal that can be displayed

■ COMPONENT (Y, P_B, P_R (from AV2 IN terminal)), HDMI

Signal name	COMPONENT	HDMI
525 (480) / 60i	○	○
525 (480) / 60p	○	○
625 (576) / 50i	○	○
625 (576) / 50p	○	○
750 (720) / 60p	○	○
750 (720) / 50p	○	○
1,125 (1,080) / 60i	○	○
1,125 (1,080) / 50i	○	○
1,125 (1,080) / 60p		○
1,125 (1,080) / 50p		○
1,125 (1,080) / 24p		○

○ : Applicable input signal

■ PC (from D-sub 15P)

Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)
640 × 400 @70 Hz	31.47	70.07
640 × 480 @60 Hz	31.47	59.94
640 × 480 @75 Hz	37.50	75.00
800 × 600 @60 Hz	37.88	60.32
800 × 600 @75 Hz	46.88	75.00
800 × 600 @85 Hz	53.67	85.06
852 × 480 @60 Hz	31.44	59.89
1,024 × 768 @60 Hz	48.36	60.00
1,024 × 768 @70 Hz	56.48	70.07
1,024 × 768 @75 Hz	60.02	75.03
1,024 × 768 @85 Hz	68.68	85.00
1,280 × 1,024 @60 Hz	63.98	60.02
1,280 × 768 @60 Hz	47.70	60.00
1,366 × 768 @60 Hz	48.39	60.04
Macintosh13” (640 × 480)	35.00	66.67
Macintosh16” (832 × 624)	49.73	74.55
Macintosh21” (1,152 × 870)	68.68	75.06

Applicable input signal for PC is basically compatible to VESA standard timing.

■ PC (from HDMI terminal)

Signal name	Horizontal frequency (kHz)	Vertical frequency (Hz)
640 × 480 @60 Hz	31.47	60.00
1,280 × 720 @60 Hz	45.00	60.00
1,920 × 1,080 @60 Hz	67.50	60.00

Applicable input signal for PC is basically compatible to HDMI standard timing.

Note

- Signals other than above may not be displayed properly.
- The above signals are reformatted for optimal viewing on your display.
- PC signal is magnified or compressed for display, so that it may not show fine detail with sufficient clarity.

FAQs

Before requesting service or assistance, please follow these simple guides to resolve the problem.
If the problem still persists, please contact your local Panasonic dealer for assistance.

White spots or shadow images (noise)
- Check the position, direction, and connection of the aerial.

Neither image nor sound is produced
- Check the TV is turned on.
- Check the mains lead is plugged into the TV and the socket outlet.
- Check the TV is in AV mode.
- Check the correct input mode is selected.
- Check the Picture Menu (p. 31, 32) and volume.
- Check all required cables and connections are firmly in place.

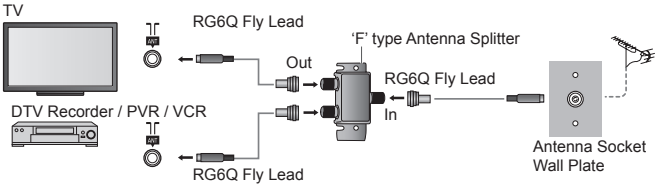
Black and white picture
- Check that the output of the external equipment matches the input of the TV.

[VIERA Link] function does not work and an error message appears
- Confirm the connection. ➡**(p. 61, 62)**
- Turn the connected equipment on and then switch the TV on. ➡ **(p. 63)**

The screen becomes dim
- This occurs when the contrast is lowered automatically to avoid image retention in the following conditions without any user operation for a few minutes:
  - No signal in Digital TV or AV mode
  - Selected locked channel
  - Selected invalid channel
  - Selected radio channel
  - Displayed menu
  - Thumbnail or still picture

Pixel Statement
- An image on a LCD or Plasma TV screen is created by many small groups of dots known as pixels (which is similar to the image in a newspaper). It also naturally follows that higher panel resolutions contain more pixels. To create a colour image, each pixel consists of three tiny coloured dots (known as sub-pixels), one each of red, green and blue. Each one of these dots is precisely controlled by the electronics of the TV to produce the picture. Whilst Panasonic maintains the highest standards in manufacturing technology and processes in the construction of these panels, there are a number of allowable pixel/subpixel failures that still allow the panel to be defined as a good panel. It is not possible to guarantee absolutely no pixel loss.

	Problem	Causes / Actions
Screen	**Chaotic image, noisy**	● Set [P-NR] in the Picture Menu to remove noise. ➡ **(p. 31)** ● Check nearby electrical products (car, motorcycle, fluorescent lamp).
	No image can be displayed	● Is [Contrast], [Brightness] or [Colour] in the Picture Menu set to the minimum? ➡ **(p. 31)**
	Blurry or distorted image (no sound or low volume)	● Reset channels. ➡ **(p. 39, 40)**
	Unusual image is displayed	● Turn the TV off with Mains power On / Off switch, then turn it on again. ● If the problem persists, initialise all settings. ➡ **[Shipping Condition] (p. 42)**
	[Shop] appears on screen at switch on	● [Shop] was selected in [Auto Tuning] (p. 18) Reset settings in [Shipping Condition] (p. 42), then select [Home] in [Auto Tuning] ➡ **(p. 18)**
Sound	**No sound is produced**	● Is “Sound mute” active? ➡**(p. 9)** ● Is the volume set to the minimum?
	Sound level is low or sound is distorted	● Sound signal reception may be deteriorated. ● Set [MPX] (p. 33) in the Sound Menu to [Mono]. (Analogue TV)
	Unusual sound from the TV	● When power is on, drive noise may be heard from inside the TV (not a sign of faulty operation).

	Problem	Causes / Actions
HDMI	**Sound is unusual**	• Set the sound setting of the connected equipment to “2ch L.PCM”. • Check the [HDMI1 / 2 Input] setting in the Sound Menu. ➡ **(p. 34)** • If digital sound connection has a problem, select analogue sound connection. ➡ **(p. 77)**
	Pictures from external equipment are unusual when the equipment is connected via HDMI	• Check the HDMI cable is connected properly. ➡ **(p. 68, 70)** • Turn the TV and equipment off, then turn them on again. • Check an input signal from the equipment. ➡ **(p. 79)** • Use equipment compliant with EIA/CEA-861/861D.
Network	**Cannot connect to the network**	• Check the LAN cable or Wireless LAN Adaptor is connected properly. ➡ **(p. 54)** • Check the connections and settings. ➡ **(p. 54 - 56)** • Check the network equipment and network environment. • The router may not be set to issue IP address automatically. If the network administrator prefers to allocate an IP address, set an IP address manually. ➡ **(p. 55)** • The router may be using MAC address filtering (security setting). Confirm the MAC Address of this TV **(p. 36)** and set the router to use it.
	Cannot select the file during DLNA operations	• Is media server of the connected equipment prepared? ➡ **(p. 53)** • Check applicable data format. ➡ **(p. 74, 75)**
Digital TV	**Connecting devices such as DTV recorder / PVR / VCR etc that also require an antenna connection to the digital television**	• To maintain optimum antenna signal quality, use an ‘F’ type TV signal splitter (as illustrated) when connecting two or more devices to the same antenna socket.  • Hint: Some degradation of the DTV signal may occur if you are connecting the aerial through an external device (e.g. DVD Recorder or Set Top Box). In this case it is better to use a splitter and connect the aerial directly to both devices.
	After digital TV tuning, (or re-tuning) some or all DTV channels are missing	• Check to ensure your area is covered by DTV transmissions. • Check that the aerial and antenna cable are designed for DTV reception. If you live within 5-10 km of DTV transmission towers, a combined VHF / UHF Digital TV aerial should be adequate. Outside this area, separate VHF and UHF aerials provide superior reception performance. • If you live in a unit or apartment, check to ensure the Master Antenna TV (MATV) system is designed for analogue and DTV reception. Please consult your body corporate.
	Picture infrequently pixelates on some or all channels	• Electrical interference caused by local or distant lighting storms, heavy rain, high wind etc. may cause picture to break up and or audio to mute / distort momentarily. • Impulse noise interference from an infrequently used electrical appliance, or a passing vehicle or lawn mower with a “noisy” ignition system. • Older style antenna cabling, loose fitting/corroded wall socket connections / terminals etc.

	Problem	Causes / Actions
Digital TV	**Picture regularly pixelates on some channels, or 'No Signal' message**	● Check [Signal Condition] via TV Setup menu. If [Signal Quality] or [Signal Strength] is red/orange or constantly changing, check aerial/cable/connections. If problem persists, consult your local TV antenna installer. ● Too much signal; is [Signal Strength] always at full strength? If yes, try attenuating (reducing) the signal strength. ● Check that the aerial and antenna cable are designed for DTV reception. ● The received signal may be too weak to allow the TV to reliably lock to the selected channel to generate a viewable picture. If problem persists, consult your local TV aerial installer. ● Interference from household appliances (known as impulse noise) such as light switches, fridges etc. may cause picture break up and / or audio distortion. Use high quality quad shielded coaxial cable (RG6Q) fly lead between TV and antenna wall socket to minimise impulse noise pickup. If problem persists, consult your local TV aerial installer. ● Antenna installation may be using an aerial amplifier that is faulty or an older style aerial amplifier that was not designed for digital TV. ● Older style antenna cabling, loose fitting / corroded wall socket connections / terminal s etc. ● Turn the TV off with the Mains power On / Off switch, then turn it On again.
	Note Digital TV reception is only as good as the antenna and the antenna cabling delivering the DTV signals to the television. Reliable digital TV reception requires high quality, robust DTV signals which can only be achieved when using a TV antenna and cabling designed for digital TV reception. ● Further reading please visit: http://www.digitalready.gov.au/publications.aspx where you can download 'The Digital TV Antenna Systems for Homes Handbook' information pdf file. U50A series ● For your safety, the antenna and cabling should be inspected / installed by a licensed installer that should comply with Australian Standard AS1417.1 for Domestic installations or AS1367 for MATV installations. U50A series	
Other	**The TV does not switch on**	● Check the mains lead is plugged into the TV and the socket outlet.
	The TV goes into Standby mode	● Auto power standby function is activated. ➡ **(p. 11)** ● The TV enters Standby mode about 30 minutes after analogue broadcasting ends.
	The remote control does not work or is intermittent	● Are the batteries installed correctly? ➡ **(p. 7)** ● Has the TV been switched on? ● The batteries may be running low. Replace them. ● Point the remote control directly at the TV's remote control signal receiver (within about 7 m and a 30 degree angle of the signal receiver). ● Situate the TV away from sunshine or other sources of bright light not to shine on the TV's remote control signal receiver.
	Parts of the TV become hot	● Even when the temperature of parts of the front, top and rear panels has risen, these temperature rises do not cause any problems in terms of performance or quality.
	Permanently lit spots on screen	● Due to production process involved in this technology this may result in some pixels which are permanently lit or unlit. This is not a malfunction.
	Overcurrent error message appears	● The connected USB device might cause this error. Remove the device and turn the TV off with Mains power On / Off switch, then turn it on again. ● Check foreign objects are not inside the USB port.
	An error message appears	● Follow the message's instructions. ● If the problem persists, contact your local Panasonic dealer or the authorised service centre.

Maintenance

First, remove the mains plug from the socket outlet.

Display panel, Cabinet, Pedestal

Regular care:
Gently wipe the surface of the display panel, cabinet, or pedestal by using a soft cloth to clean the dirt or fingerprints.

For stubborn dirt:
First clean the dust on the surface. Dampen a soft cloth with clean water or diluted neutral detergent (1 part detergent to 100 parts water). Wring the cloth and wipe the surface. Finally, wipe away all the moisture.

Caution

- Do not use a hard cloth or rub the surface too hard, otherwise this may cause scratches on the surface.
- Take care not to subject the TV's surfaces to water or detergent. Liquid inside the TV could lead to product failure.
- Take care not to subject the surfaces to insect repellent, solvent, thinner or other volatile substances. This may degrade surface quality or cause peeling of the paint.
- The surface of the display panel is specially treated and may be easily damaged. Take care not to tap or scratch the surface with your fingernail or other hard objects.
- Do not allow the cabinet and pedestal to make contact with a rubber or PVC substance for a long time. This may degrade surface quality.

Mains plug

Wipe the mains plug with a dry cloth at regular intervals. Moisture and dust may lead to fire or electrical shock.

Specifications

		U50A series	U50Z series	X50Z series
Model No.		**TH-P50U50A**	**TH-P50U50Z**	**TH-P42X50Z TH-P50X50Z**
Sound	**Speaker**	(160 mm × 40 mm) × 2, 8 Ω		
	Audio output	20 W (10 W + 10 W)		
	Headphones	M3 (3.5 mm) stereo mini Jack × 1		
Receiving systems / Band name	**PAL B / G**	Reception of Off air broadcasts		
	Digital TV	7 MHz VHF / UHF (Australia) free-to-air TV broadcast reception	8 MHz UHF (New Zealand) free-to-air TV broadcast reception	
	PAL 60 Hz	Playback of NTSC tape from some PAL Video recorders (VCR)		
	M.NTSC	Playback from M.NTSC Video recorders (VCR)		
	NTSC	Playback from NTSC Video recorders (VCR)		
Aerial - Rear		Standard Belling & Lee connector	VHF / UHF	
Operating Conditions		**Temperature:** 0 °C - 35 °C **Humidity:** 20 % - 80 % RH (non-condensing)		
Connection terminals	**AV1 IN**	**AUDIO L - R**	RCA PIN Type × 2	0.5 V[rms]
		VIDEO	RCA PIN Type × 1	1.0 V[p-p] (75 Ω)
	AUDIO OUT	**AUDIO L - R**	RCA PIN Type × 2	0.5 V[rms] (high impedance)
	AV2 IN	**AUDIO L - R**	RCA PIN Type × 2	0.5 V[rms]
		COMPONENT	Y P_B/C_B, P_R/C_R	1.0 V[p-p] (including synchronisation) ±0.35 V[p-p]
		VIDEO	RCA PIN Type × 1	1.0 V[p-p] (75 Ω)
	HDMI 1 / 2 input	TYPE A Connectors ● This TV supports “HDAVI Control 5” function.		
	PC	HIGH-DENSITY D-SUB 15PIN R,G,B: 0.7 V[p-p] (75 Ω) HD, VD: TTL Level 2.0 – 5.0 V[p-p] (high impedance) ● Applicable input signals: VGA, SVGA, WVGA, XGA SXGA, WXGA		HIGH-DENSITY D-SUB 15PIN R,G,B: 0.7 V[p-p] (75 Ω) HD, VD: TTL Level 2.0 – 5.0 V[p-p] (high impedance) ● Applicable input signals: VGA, SVGA, WVGA, XGA SXGA, WXGA ····· (compressed)
	Card slot	SD Card slot × 1		
	ETHERNET	10BASE-T / 100BASE-TX		
	USB	USB2.0 DC 5 V, Max. 500 mA		
	DIGITAL AUDIO OUT	PCM / Dolby Digital, Fibre optic		

U50 series

		50” class
Model No.		TH-P50U50A TH-P50U50Z
Power	Power rating	AC 220-240 V, 50 / 60 Hz 1.7 A
	Normal (Home) mode	137 W
	Standby condition	0.4 W
Display panel	Panel system	Plasma Display
	Visible screen size (diagonal)	127 cm / 50 inches
	Number of pixels	2,073,600 (1,920 (W) × 1,080 (H)) [5,760 × 1,080 dots]
Dimensions (W × H × D)		1,184 mm × 757 mm × 266 mm (With Pedestal) 1,184 mm × 716 mm × 82 mm (TV only)
Mass		23.5 kg Net (With Pedestal) 22.5 kg Net (TV only)

X50 series

		42” class	50” class
Model No.		TH-P42X50Z	TH-P50X50Z
Power	Power rating	AC 220-240 V, 50 / 60 Hz 1.1 A	AC 220-240 V, 50 / 60 Hz 1.4 A
	Normal (Home) mode	89 W	122 W
	Standby condition	0.4 W	0.4 W
Display panel	Panel system	Plasma Display	
	Visible screen size (diagonal)	107 cm / 42 inches	127 cm / 50 inches
	Number of pixels	786,432 (1,024 (W) × 768 (H)) [3,072 × 768 dots]	
Dimensions (W × H × D)		1,007 mm × 657 mm × 231 mm (With Pedestal) 1,007 mm × 615 mm × 81 mm (TV only)	1,184 mm × 757 mm × 266 mm (With Pedestal) 1,184 mm × 716 mm × 81 mm (TV only)
Mass		17.5 kg Net (With Pedestal) 16.0 kg Net (TV only)	22.5 kg Net (With Pedestal) 21.0 kg Net (TV only)

Note

- Design and Specifications are subject to change without notice. Mass and Dimensions shown are approximate.

Panasonic Warranty

1. The product is warranted for 12 months from the date of purchase. Subject to the conditions of this warranty Panasonic or its Authorised Service Centre will perform necessary service on the product without charge for parts or labour, if in the opinion of Panasonic, the product is found to be faulty within the warranty period.
2. This warranty only applies to Panasonic products purchased in Australia and sold by Panasonic Australia or its Authorised Distributors or Dealers and only where the products are used and serviced within Australia or it's territories. Warranty cover only applies to service carried out by a Panasonic Authorised Service Centre and only if valid proof of purchase is presented when warranty service is requested.
3. This warranty only applies if the product has been installed and used in accordance with the manufacturer's recommendations (as noted in the operating instructions) under normal use and reasonable care (in the opinion of Panasonic). The warranty covers normal domestic use only and does not cover damage, malfunction or failure resulting from use of incorrect voltages, incorrect installation, accident, misuse, neglect, build-up of dirt or dust, abuse, maladjustment of customer controls, mains supply problems, thunderstorm activity, infestation by insects or vermin, tampering or repair by unauthorised persons (including unauthorised alterations), introduction of sand, humidity or liquids, commercial use such as hotel, office, restaurant, or other business or rental use of the product, exposure to abnormally corrosive conditions or any foreign object or matter having entered the product.
4. This warranty does not cover the following items unless the fault or defect existed at the time of purchase:
   (a) Cabinet Part(s)
   (b) Video or Audio Tapes
   (c) SD cards or USB devices
   (d) User replaceable Batteries
   (e) DVD, Blu-ray, or Recordable Discs
   (f) Video / Audio Heads from wear and tear in normal use
   (g) Information stored on Hard Disk Drive, USB stick or SD card
   (h) DTV reception issues caused by TV Aerial / Cabling / Wall socket(s)
   etc
5. Some products may be supplied with Ethernet connection hardware. The warranty is limited on such products and will not cover
   (a) Internet and or DLNA connection / setup related problems
   (b) Access fees and or charges incurred for internet connection
   (c) The use of incompatible software or software not specifically stipulated in the product operations manual; and
   (d) Any indirect or consequential costs associated with the incorrect use or misuse of the hardware, its connection to the internet or any other device.
6. To claim warranty service, when required, you should:
   • Telephone Panasonic's Customer Care Centre on 132600 or visit our website referred to below and use the Service Centre Locator for the name/address of the nearest Authorised Service Centre.
   • Send or take the product to a Panasonic Authorised Service Centre together with your proof of purchase receipt as a proof of purchase date. Please note that freight and insurance to and / or from your nearest Authorised Service Centre must be arranged by you.
   • Note that home or pick-up/delivery service is available for the following products in the major metropolitan areas of Australia or the normal operating areas of the nearest Authorised Service Centres:
   - Plasma/LCD televisions / displays (screen size greater than 103 cm)
7. The warranties hereby conferred do not extend to, and exclude, any costs associated with the installation, de-installation or re-installation of a product, including costs related to the mounting, de-mounting or remounting of any screen, (and any other ancillary activities), delivery, handling, freighting, transportation or insurance of the product or any part thereof or replacement of and do not extend to, and exclude, any damage or loss occurring by reason of, during, associated with, or related to such installation, de-installation, re-installation or transit.

Panasonic Authorised Service Centres are located in major metropolitan areas and most regional centres of Australia, however, coverage will vary dependant on product. For advice on exact Authorised Service Centre locations for your product, please telephone our Customer Care Centre on 132600 or visit our website and use the Service Centre Locator.

In addition to your rights under this warranty, Panasonic products come with consumer guarantees that cannot be excluded under the Australian Consumer Law. If there is a major failure with the product, you can reject the product and elect to have a refund or to have the product replaced or if you wish you may elect to keep the goods and be compensated for the drop in value of the goods. You are also entitled to have the product repaired or replaced if the product fails to be of acceptable quality and the failure does not amount to a major failure.

If there is a major failure in regard to the product which cannot be remedied then you must notify us within a reasonable period by contacting the Panasonic Customer Care Centre. If the failure in the product is not a major failure then Panasonic may choose to repair or replace the product and will do so in a reasonable period of time from receiving notice from you.

THIS WARRANTY CARD AND THE PURCHASE DOCKET (OR SIMILAR PROOF OF PURCHASE) SHOULD BE RETAINED BY THE CUSTOMER AT ALL TIMES

If you require assistance regarding warranty conditions or any other enquiries, please visit the **Panasonic Australia** website **www.panasonic.com.au** or contact by phone on **132 600**
If phoning in, please ensure you have your operating instructions available.

Panasonic Australia Pty. Limited
ACN 001 592 187 ABN 83 001 592 187
1 Innovation Road, Macquarie Park NSW 2113

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WARRANTY - New Zealand only

WE WARRANT that the Panasonic Television that you have purchased is free from defects in material and workmanship under normal home use and service.
Accordingly, we undertake to repair, or at our option, replace without cost to the owner, either for material or labour, any part which within 12 months from the date of delivery is found to be defective, provided that the appliance has been used for domestic purposes only and in accordance with the instructions given in the Instruction Book and not been subjected to misuse, neglect or installed, dismantled, repaired or serviced by any other than an authorised Panasonic New Zealand Dealer or Panasonic New Zealand Authorised Service Centre.
NOTE

- Before reporting a fault, please ensure that you read the item "Troubleshooting" in the information section of your Panasonic Instruction Book.
- It is important to retain your proof of purchase as this will be required by the serviceman or retailer as proof of purchase date, should service be required.
- In the event of service being required, contact your Panasonic New Zealand retailer or Panasonic New Zealand Authorised Service Centre.

IMPORTANT
Any request for warranty service must be through an Authorised Panasonic New Zealand Service Centre who during the period of the warranty, undertakes to make any necessary adjustment and fit any replacement part supplied by the manufacturer, during normal working hours, or alternatively will arrange for such service to be provided by some other Panasonic New Zealand Authorised Service Centre.

NEW ZEALAND

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